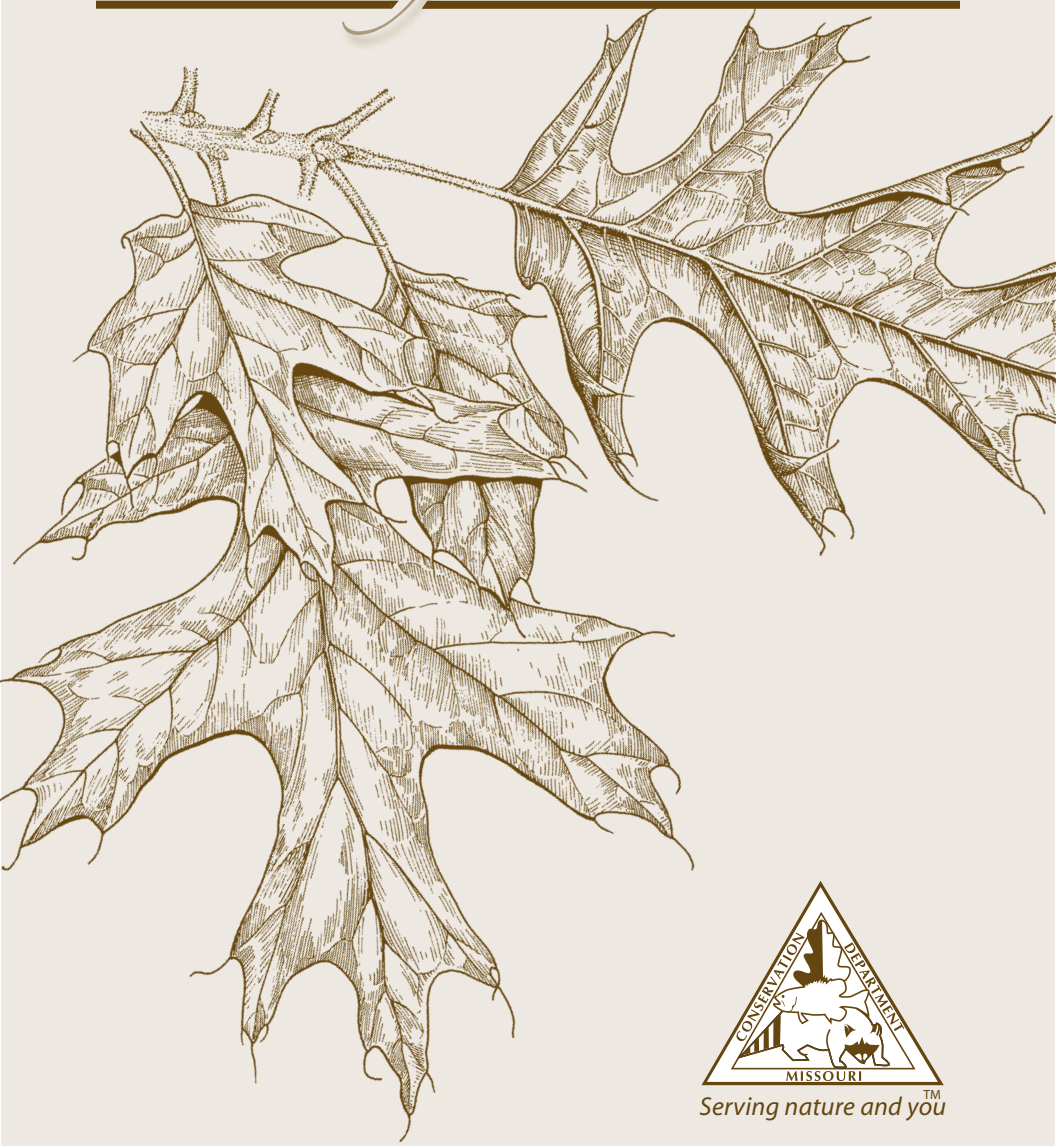
Fifty Common Trees of Missouri



Serving nature and you™

Table of Contents

Credits
Authors: David M. Knotts and Frances Main
Technical review: Greg Hoss, John Fleming
Illustrations: Paul Nelson

A note on capitalization: In accordance with the style of the *Checklist of United States Trees (Native and Naturalized)* by Elbert J. Little, published by the Forest Service, United States Department of Agriculture, 1979, common names of trees have not been capitalized.

Introduction

One of the most common questions I receive during events such as the Missouri State Fair, meetings with educational groups and others is, "Do you have a simple booklet for the trees of Missouri?" In the past, the Missouri Department of Conservation offered Missourians a small booklet that covered basic information on the fifty most common trees of the state, but that publication became outdated and went out of print. Now we've revised the old booklet–updated the information, refreshed the illustrations and added several new appendices. We present *Fifty Common Trees of Missouri* as a field guide only; it is not meant to be a comprehensive text on the trees of Missouri. If you want a comprehensive guide, please see the notice about *Trees of Missouri* on page 61. From an education standpoint, I hope this new booklet will serve as link between tree identification and a greater understanding of how trees relate to the production of food, fiber and all the other forest products we enjoy.

Robert L. Krepps
Missouri State Forester
Missouri Department of Conservation
February 11, 2005

Green ash

Scientific name: *Fraxinus pennsylvanica*

Growth rate: Fast

Height: Medium to large tree, up to 80 feet tall

Leaves: Deciduous, opposite, pinnately compound (6 to 10 inches long), 5 to 9 ovate to lanceolate leaflets (each leaflet 3 to 6 inches long), finely serrated; glossy, dark green above, lighter green beneath, turning yellow-orange or purple-maroon in the fall. Green ash is distinguished from white ash by shield-shaped leaf scars on the twigs.

Flowers: Appear after the leaves, dioecious, hanging in small purplish clusters

Fruit: August–September, samara, 2 inches long, green to pale brown, hanging in clusters

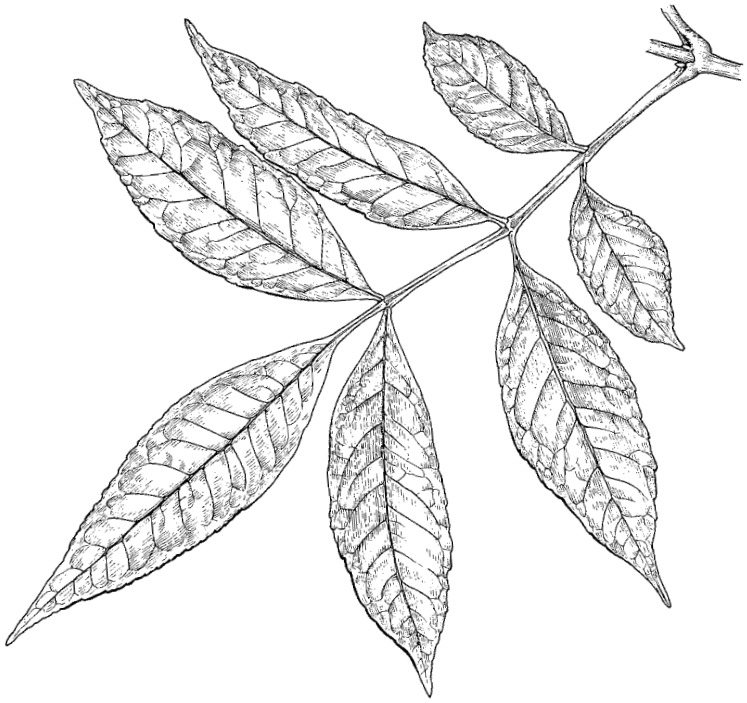
Bark: Gray, ridges interlaced to form a diamond pattern

Habitat: Occurs on wet sites such as bottomland soils, along streams, borders of sloughs, edges of swamps and ponds

Wildlife uses: Food (fruit), dens

Human uses: Windbreaks, erosion control, landscaping and wood products

Interesting fact: Historically, green ash, along with white ash, has been the preferred wood for making baseball bats.



White ash

Scientific name: *Fraxinus amerciana*

Growth rate: Medium to fast

Height: Medium to large tree, up to 90 feet tall

Leaves: Deciduous, opposite, pinnately compound (8 to 15 inches long), 5 to 9 ovate to lanceolate leaflets (each leaflet 3 to 6 inches long), finely serrate to entire; glossy, dark green above, lighter green beneath, turning yellow-orange or purple-maroon in the fall. White ash is distinguished from green ash by the horseshoe-shaped leaf scar on the twigs. The leaf is larger and the leaflets are typically more pointed.

Flowers: Appearing before or at leaf development, dioecious, dense purple clusters

Fruit: August-September, samaras produced in dense clusters up to 8 inches long

Bark: Light gray to dark brown, grooves deep, ridges forming a diamond pattern

Habitat: Occurs along slopes, bases of bluffs, upland and rocky woods, and glades

Wildlife uses: Food (fruit and leaves)

Human uses: Trees for landscaping; wood for baseball bats, musical instruments, cabinets, doors, frames, veneer, handles, boats and fuel

Interesting fact: See green ash.

American basswood

Also known as: Tilia; linden

Scientific name: *Tilia americana*

Growth rate: Fast

Height: Medium to large tree, up to 100 feet tall

Leaves: Deciduous, alternate, simple, broadly ovate with a long and pointed apex, 5 to 6 inches long, 3 to 5 inches wide, notched at base, coarsely serrate, palmately veined; glossy, dark green above, light green beneath, turning yellow in fall

Flowers: Late May-July, monoecious; 6 to 16 flowers born on a drooping, smooth stalk; 1½ to 4 inches long

Fruit: August-October; nutlike, woody, thick, shell, about ⅓ to ½ inch in diameter, enclosing a single seed; attached by a slender stalk; persistent, leaflike bract

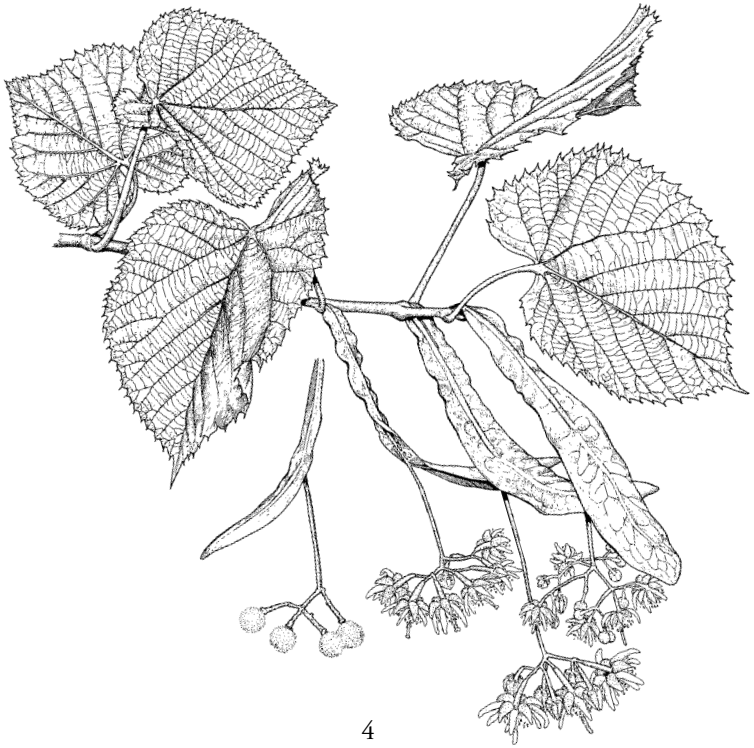
Bark: Light brown to gray; long, narrow furrows; very fibrous

Habitat: Occurs in moist woods on lower slopes, at the base of bluffs and along streams

Wildlife uses: Food (fruit, nectar and leaves)

Human uses: Wood for carving, musical instruments, woodenware, toys, pulp, furniture and boxes; flower for high-quality bee honey

Interesting fact: Basswood is a favorite wood for carving waterfowl decoys.



River birch

Scientific name: *Betula nigra*

Growth rate: Fast

Height: Medium tree, up to 80 feet tall

Leaves: Deciduous, alternate, simple, 1½ to 3½ inches long, 1 to 2 inches wide, ovate, doubly serrate; dark green above, light green beneath, turning dull yellow in the fall

Flowers: April-May, monoecious, drooping clusters 2 to 4 inches long, about ½ inch in diameter, pale yellow to creamy white; fragrant

Fruit: May-June, ovoid, cone-shaped, 1½ inches long, ½ inch wide

Bark: Reddish-brown to gray, peeling into papery strips, exposing a light pinkish-tan or cinnamon-brown inner bark

Habitat: Occurs in moist ground along streams and gravel bars; common throughout Missouri

Wildlife uses: Food (seeds, twigs)

Human uses: Landscaping, erosion control

Interesting fact: Native Americans and European settlers made birch beer by boiling down the sap and adding honey, then fermenting.

Blackgum

Also known as: Beegum; gum tree

Scientific name: *Nyssa sylvatica*

Growth rate: Slow

Height: Large trees, up to 100 feet tall

Leaves: Deciduous, alternate, simple, obovate to elliptical, 2 to 6 inches long, entire; dark green above, light green beneath, turning bright red in fall

Flowers: April-June, appearing as the leaves unfold, dioecious, two or more in a cluster, greenish-white

Fruit: September-October, fleshy, oval, drupe on 1- to 3-inch stems, dark purple; thin skin with solitary, light brown oval seed

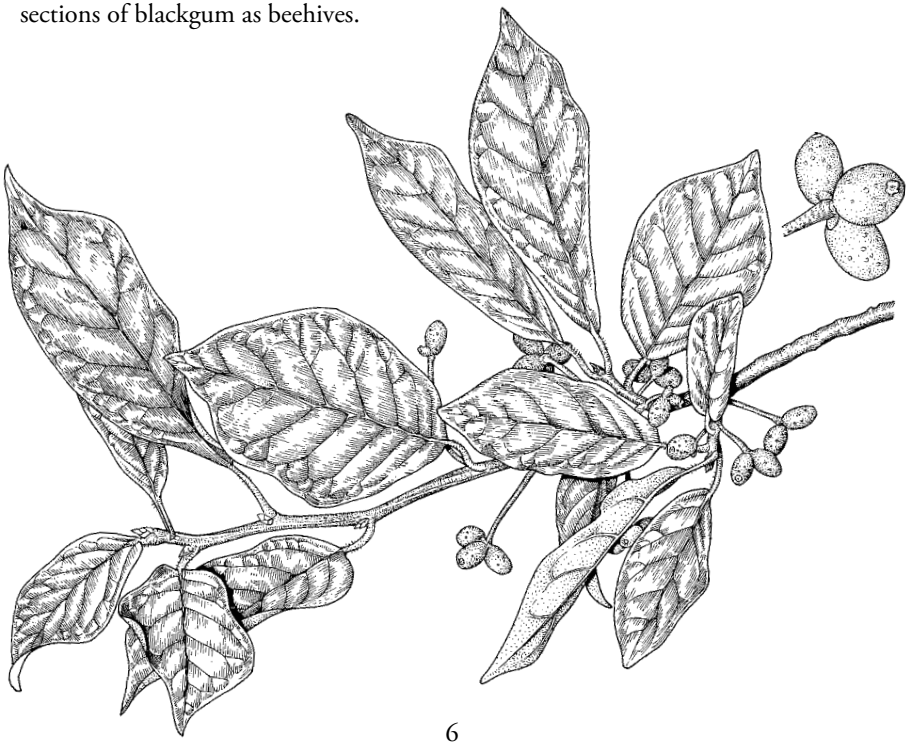
Bark: Gray to brown or black; deeply grooved, forming square blocks

Habitat: Occurs in acidic soils overlaying sandstone, chert or igneous substrate of dry, rocky wooded slopes, ridges, ravines and borders of sinkhole ponds in the Ozarks and lowland forests in the southeastern part of the state

Wildlife uses: Food (fruit and leaves), dens

Human uses: Trees for landscaping; wood for veneer, plywood, boxes, pulp, tool handles and gunstocks

Interesting fact: Early settlers, who referred to the tree as beegums, used hollow sections of blackgum as beehives.



Boxelder

Scientific name: *Acer negundo*

Growth rate: Fast-growing, short lived (< 80 years)

Height: Medium tree, up to 70 feet tall

Leaves: Deciduous, opposite, pinnately compound (6 inches long) 3 to 5 slightly lobed leaflets (2 to 4 inches long), pointed base; dark green above, pale beneath, turning yellow to red in fall

Flowers: April-May, appearing before or with the leaves, dioecious, yellow-green; clustered on slender, drooping stalks

Fruit: August-October, samara, 1 to 2 inches long; drooping clusters, 6-8 inches long, with samara attached in pairs; persistant

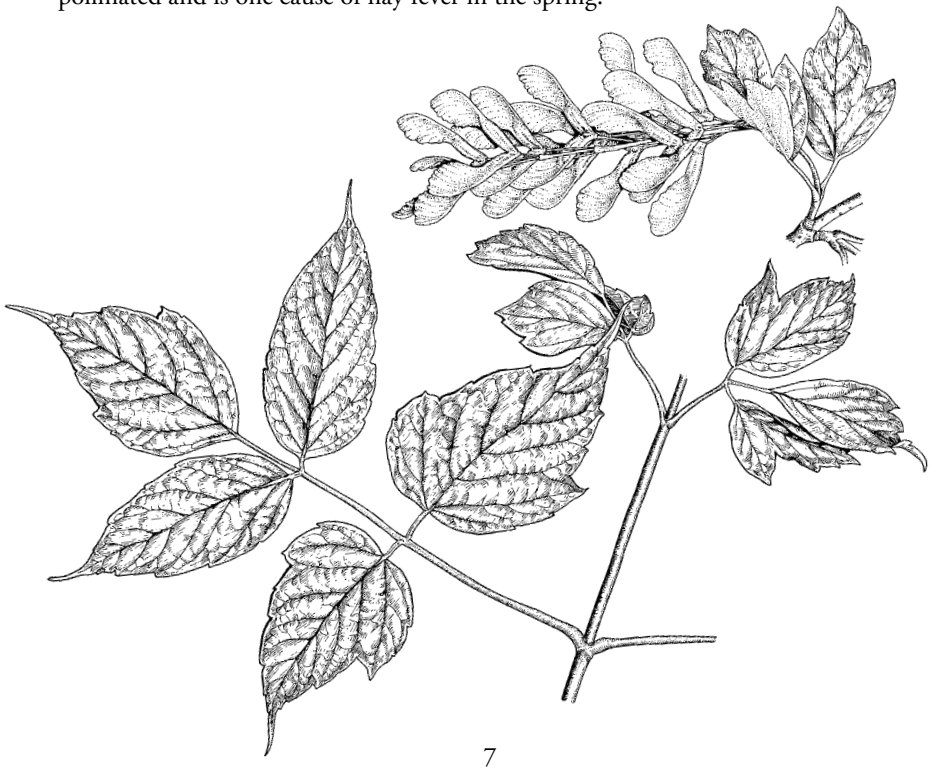
Bark: Smooth, green on young trees; pale gray to brown on mature trees; separating into long thin ridges; shallow grooves

Habitat: Occurs in bottomlands, margins of swamps, moist ground along streams, bottoms of ravines, bases of bluffs, edges of woods and disturbed sites

Wildlife uses: Food (seeds)

Human uses: Wood for paper pulp, crates, woodenware and inexpensive furniture

Interesting fact: Boxelder is the only member of the maple family that is wind pollinated and is one cause of hay fever in the spring.



Ohio buckeye

Scientific name: *Aesculus glabra*

Growth rate: Slow

Height: Variable from shrub to medium tree, up to 40 feet tall

Leaves: Deciduous, opposite, palmately compound (5 to 7 leaflets, 3 to 6 inches long), entire at base, serrate at apex; light green above, pale beneath, turning yellow-orange in fall; foul smelling when crushed

Flowers: April-May after leaves are fully developed, monoecious, large clusters 4 to 7 inches long at ends of branches, greenish-yellow

Fruit: September-October, nut; leatherlike spiny husk containing a mahogany-colored seed (buckeye)

Bark: Dark brown, smooth, turning gray; broken into plates roughened by numerous small scales; foul smelling

Habitat: Occurs in rich or rocky woods in valleys, ravines, gentle or steep slopes, bases of bluffs, edges of low woods, thickets and occasionally on edges of limestone glades throughout Missouri, except for the extreme southeastern region

Wildlife uses: Food (nectar)

Human uses: Wood for fuel, paper pulp, artificial limbs, splints, woodenware, boxes, crates, toys, furniture, veneer for trunks, drawing boards, carving and occasionally for lumber

Interesting fact: People have carried buckeyes in their pockets for good luck and to prevent rheumatism. It should be noted that the seeds are toxic to humans and livestock.

Eastern redcedar

Also known as: Cedar

Scientific name: *Juniperus virginiana*

Growth rate: Medium

Height: Small to medium tree, up to 50 feet tall

Leaves: Evergreen, opposite; scalelike on small, square central stem

Flowers: March-May, usually dioecious, minute males are yellow-brown in large groups, females are blue-green

Fruit: August-September, tiny cones on male trees; small, blue-purple berries on female; berries about ⅛ inch diameter; coated with a gray, waxy substance, giving the tree a blue hue

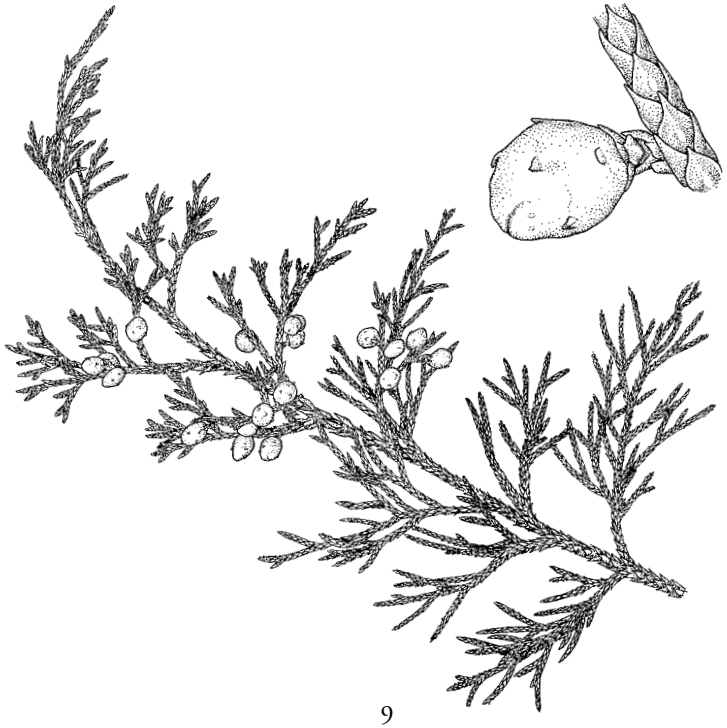
Bark: Light reddish-brown; shredding into long, thin, fibrous strips

Habitat: Occurs on glades and bluffs; open, rocky woods; pastures, old fields, roadsides and fencerows

Wildlife uses: Food (fruits), nesting and cover

Human uses: Wood for chests, closets, interior finish, posts, poles, pencils, woodenware and novelties; resin refined to produce oil used in ointments, liniments, soaps and shoe polish

Interesting fact: Eastern redcedar berries have been used to make gin.



Black Cherry

Also known as: Wild cherry

Scientific name: *Prunus serotina*

Growth rate: Medium

Height: Medium to large tree, up to 60 feet tall

Leaves: Deciduous, alternate, simple, lanceolate, 2 to 6 inches long, 1 to 2 inches wide, serrate; apex long, gradually tapering; dark green above, shiny, pale green beneath, turning yellow in fall

Flowers: May-June after the leaves have emerged; monoecious, dense, elongated cylinder-shaped clusters; 2 to 4 inches long; white

Fruit: August-September, drupe, ¼ to ½ inch in diameter; round, dark purple to black in clusters of 15 to 30; skin thin, shiny; flesh juicy, bittersweet, edible

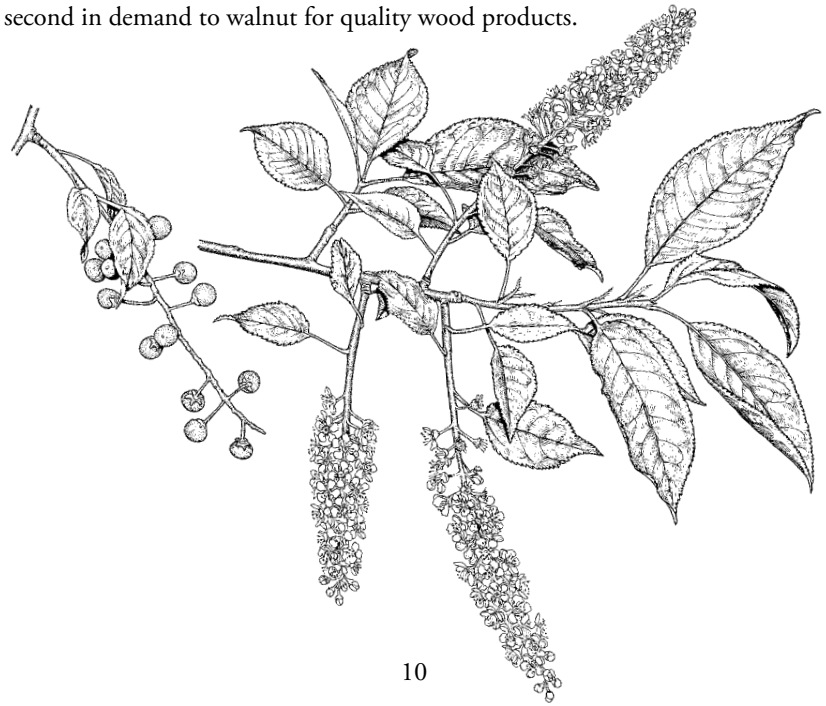
Bark: Dark reddish-brown, smooth, turning black and broken into small, scaly plates with age; lenticels obvious even on small twigs

Habitat: Occurs in low or upland woods and along streams

Wildlife uses: Food (fruit)

Human uses: Fruit for jelly and wine; furniture, cabinets, veneer, panels, interior trim and handles

Interesting facts: Wilted leaves contain cyanic acid, which can be fatal to livestock if consumed in large quantities. The scientific name *serotina* means "late" and reflects that this species blooms later than other cherries. In Missouri, black cherry is second in demand to walnut for quality wood products.



Kentucky coffeetree

Scientific name: *Gymnocladus dioicus*

Growth rate: Medium

Height: Medium to large tree, up to 60 feet tall

Leaves: Deciduous, alternate, bipinnately compound (2 to 3 feet long, 1 to 2 feet wide), leaflets ovate, entire; dull green above, lighter below, turning yellow in fall

Flowers: May-June after the leaves appear, dioecious, male flowers in clusters 3 to 5 inches long, female in clusters up to 12 inches long; whitish

Fruit: October, large pods 4 to 10 inches long, brown to black; flat, leathery skin; persistent

Bark: Gray to brown, thick, shallow-furrowed with scaly ridges; wood reddish-brown and coarse-grained

Habitat: Occurs in bottomland forests along streams and moist woods at the bases of bluffs

Wildlife uses: Food (pods, seeds)

Human uses: Wood for posts, furniture, fuel, cabinetmaking, interior finish and construction

Interesting facts: Kentucky coffeetree leaves are the largest of any native Missouri tree. Seeds have been used as a coffee substitute.

Eastern cottonwood

Scientific name: *Populus deltoides*

Growth rate: Fast

Height: Large tree, up to 100 feet (or greater) tall

Leaves: Deciduous, alternate, simple, cordate, pointed at apex, coarsely toothed, 3 to 7 inches long, similar width; shiny green above, lighter beneath, turning yellow in fall

Flowers: March-May before the leaves emerge, dioecious, male catkins red, female catkins green

Fruit: May-June, aggregate, 8- to12-inch-long clusters of alternately arranged capsules, each capsule containing multiple seeds in cottonlike mass

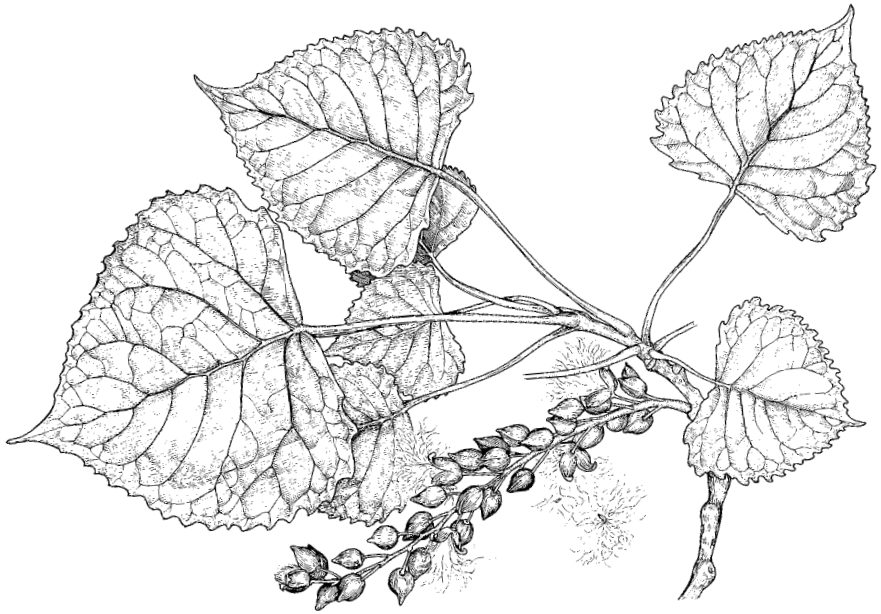
Bark: Yellow-green, thin and smooth when young; thick, corky, brown to gray, with deep, straight grooves and wide, flat ridges with age

Habitat: Occurs in moist lowlands near streams and rivers

Wildlife uses: Food (seeds, bark, leaves, buds and twigs), dens

Human uses: Trees for erosion control; wood for veneer, kite and ice cream sticks, baskets, pulpwood and fuel

Interesting facts: Eastern cottonwood is the fastest-growing native tree in Missouri. It was a favorite tree of Native Americans and early explorers for making dugout canoes.



Baldcypress

Scientific name: *Taxodium distichum*

Growth rate: Medium

Height: Large tree, up to 130 feet tall

Leaves: Deciduous, alternate, needle- and fernlike, ½ to ¾ inch long in 2 rows on opposite sides of the small twigs, turning yellow in fall

Flowers: March-April emerging before or with the leaves, monoecious; male flowers in long, drooping clusters 4 to 5 inches long; female flowers globe-shaped at end of branches, ½ to 1½ inches in diameter

Fruit: October-November, round cones, 1 inch in diameter, solitary or 2 to 3 together, 1 to 2 at end of twig, harboring 3 angled seeds about ¼ inch long

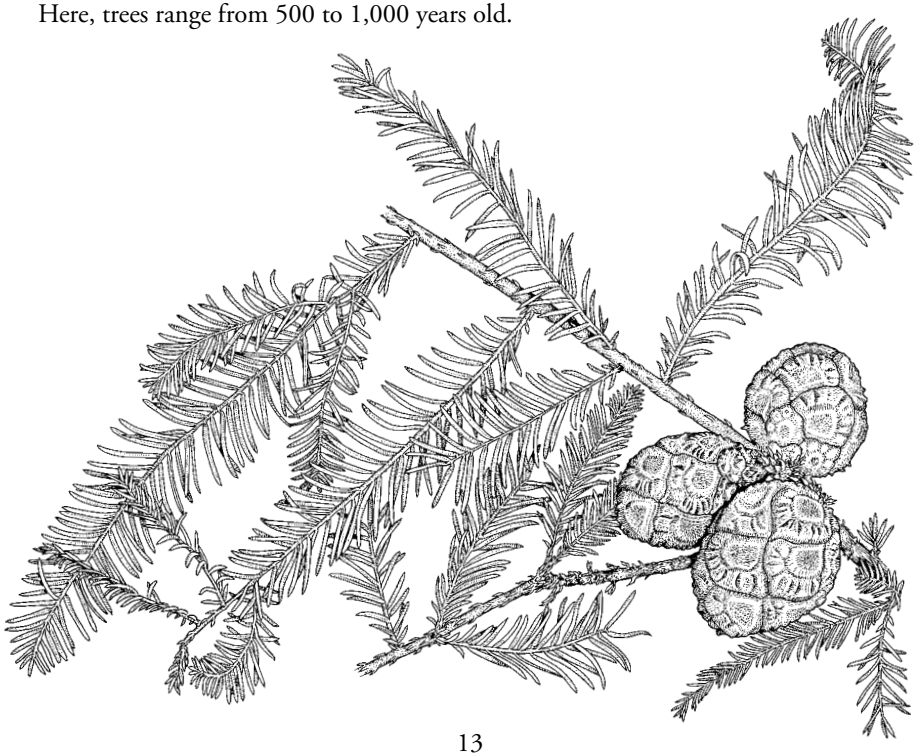
Bark: Cinnamon-brown to gray; thick, long, narrow grooves; flat, long ridges that peel off in fibrous, narrow strips

Habitat: Occurs in swamps, sloughs and wet bottomland forests

Wildlife uses: Food (seeds)

Human uses: Wood for barrels, caskets, boats, shingles, railroad ties, fence posts and bridge beams; knees for lamps and novelties

Interesting fact: The largest remaining stand of old-growth bald cypress trees in Missouri can be seen along the edge of Allred Lake Natural Area, in Butler County. Here, trees range from 500 to 1,000 years old.



Flowering dogwood

Scientific name: *Cornus florida*

Growth rate: Medium

Height: Shrub up to 30 feet tall

Leaves: Deciduous, opposite, simple, elliptical, 3 to 4 inches long, apex pointed; margin smooth, generally wavy; veins curve up towards apex; bright green above, lighter beneath, turning red to purple in fall

Flowers: Mid-April to mid-May, appearing before the leaves, monoecious, small light-green to yellow clusters; four large white petal-like bracts

Fruit: August-November, drupe, ½ inch long, bright red, oval, 1 to 2 seeds

Bark: Reddish to dark gray-brown; thin, square to round scales

Habitat: Found along wooded slopes, ravines, along bluffs, upland ridges, field edges; less common on glades, valleys and low ground; prefers well-drained, acidic soils

Wildlife uses: Food (fruits)

Human uses: Trees for landscaping; wedges, weaving shuttles, yokes, sled runners and meat skewers

Interesting facts: The flowering dogwood is the official state tree of Missouri. The hard, strong and shock-resistant wood wears smooth with use rather than splintering.

American elm

Scientific name: *Ulmus americana*

Growth rate: Medium to fast

Height: Medium to large tree, up to 70 feet tall

Leaves: Deciduous, alternate, simple, elliptical, 4 to 6 inches long, base of leaf uneven, apex short narrow point, edge doubly serrate; dark green, smooth and shiny to lightly rough above, lighter green beneath, turning yellow in fall

Flowers: February-April before the leaves emerge, monoecious, clusters along the stem; reddish

Fruit: March-May, samara, single seed surrounded by a papery wing; ½ inch-long clusters

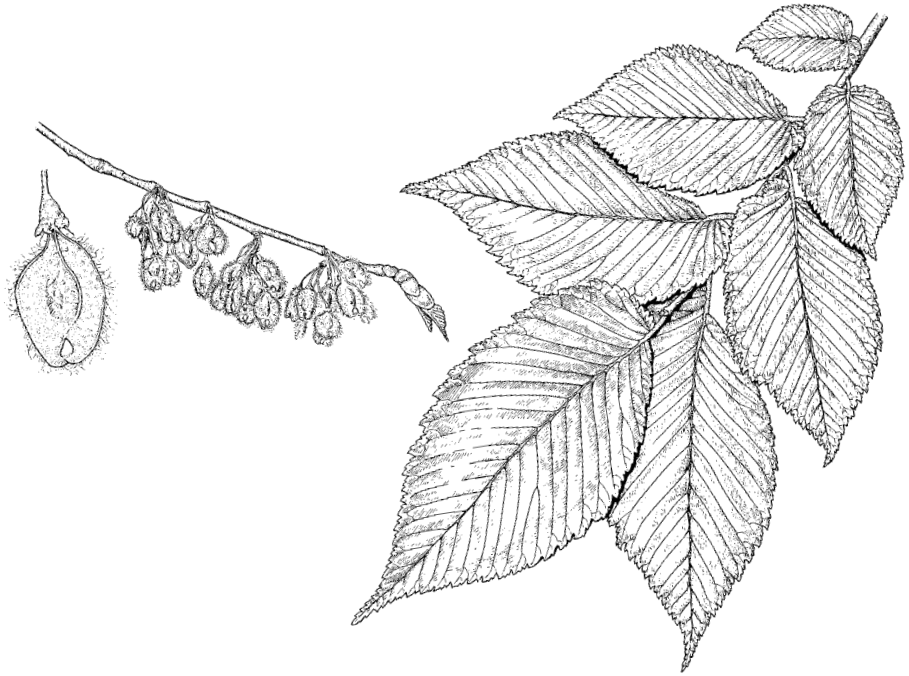
Bark: Light to dark gray, cross-section with alternating brown and white layers, deep grooves; ridges flattened with thin, closely pressed scales

Habitat: Occurs in low, moist ground in valleys and along streams

Wildlife uses: Food (seeds, leaves and twigs)

Human uses: Landscaping

Interesting fact: American elm was known historically as the all-American shade tree. Unfortunately, it is subject to Dutch elm disease, which has had a devastating impact on the species.



Slippery elm

Also known as: Red elm

Scientific name: *Ulmus rubra*

Growth rate: Fast

Height: Medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, simple, elliptical, 5 to 7 inches long; with broadest part above middle; base slightly uneven, tip long-pointed, edge doubly serrate; dark green and very rough above, light green beneath, turning yellow in fall

Flowers: February-April before the leaves emerge, monoecious, perfect, clusters on short stems; reddish

Fruit: April-June, samara; single seed surrounded by a thin, papery wing; clusters ¾ inch long

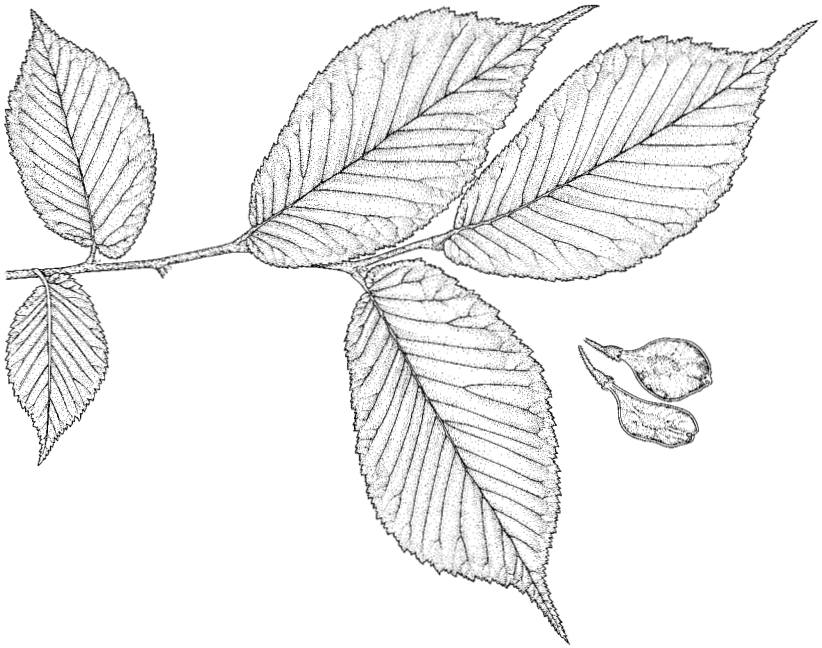
Bark: Reddish-brown, furrowed with scaly ridges, no alternating light and dark cross sectioned layers as with American elm; sticky sap

Habitat: Occurs in dry upland or rocky woods and along streams

Wildlife uses: Food (seeds, leaves and twigs)

Human uses: Landscaping, shade

Interesting fact: The inner bark of slippery elm is still used as an ingredient in lozenges for sore throats.



Hackberry

Also known as: Sugarberry

Scientific name: *Celtis occidentalis*

Growth rate: Fast

Height: Medium to large tree, up to 80 feet tall

Leaves: Deciduous, alternate, simple, 2 to 4 inches long, 1½ to 2 inches wide, ovate, rounded; unequal, with one side broader than other; rounded base; shiny green and smooth above, lighter beneath, turning yellow in fall

Flowers: April-May with or soon after the leaves, monoecious, male flowers green in small clusters; female green, single

Fruit: September, drupe, fleshy berry, ¼ to ⅜ inch diameter, purple when mature; flesh orange, sweet

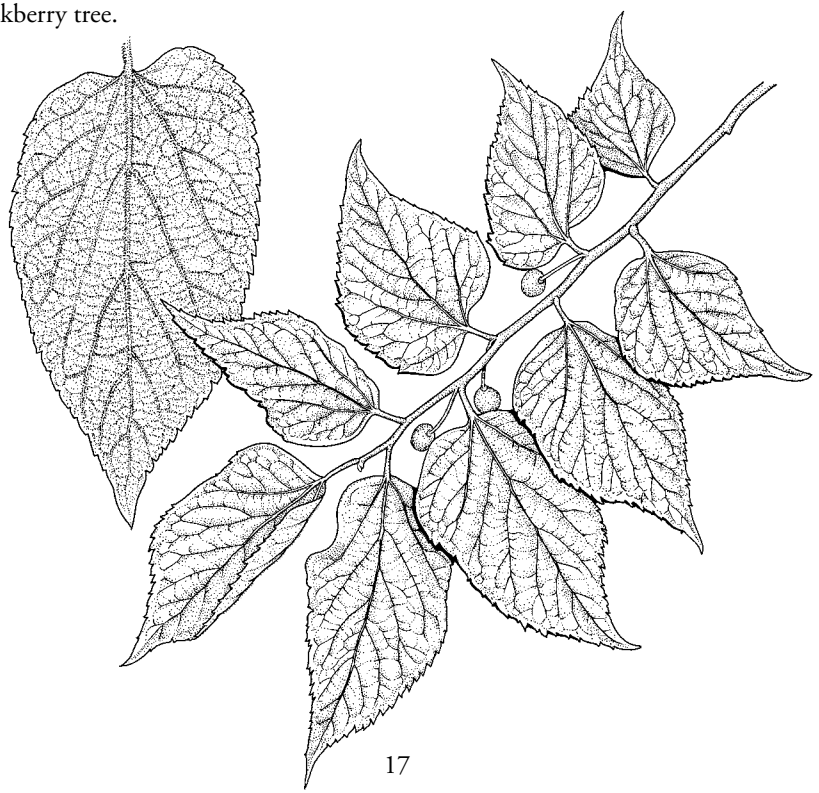
Bark: Gray with numerous wartlike projections along the trunk becoming more prominent with age

Habitat: Occurs in moist woodlands throughout Missouri

Wildlife uses: Food (fruit)

Human uses: Wood for fuel, furniture, veneer, fence posts, boxes and crates

Interesting fact: The larva of the hackberry butterfly feeds only on leaves of the hackberry tree.



Downy hawthorn

Scientific name: *Crataegus mollis*

Growth rate: Slow

Height: Small tree, up to 30 feet tall

Leaves: Simple, alternate; variable shape, elliptical to ovate; 3 to 5 inches long; turning red in fall

Flowers: April-early May, with or after the leaves emerge; monoecious; white

Fruit: September, pome, solitary or in small clusters, nearly round

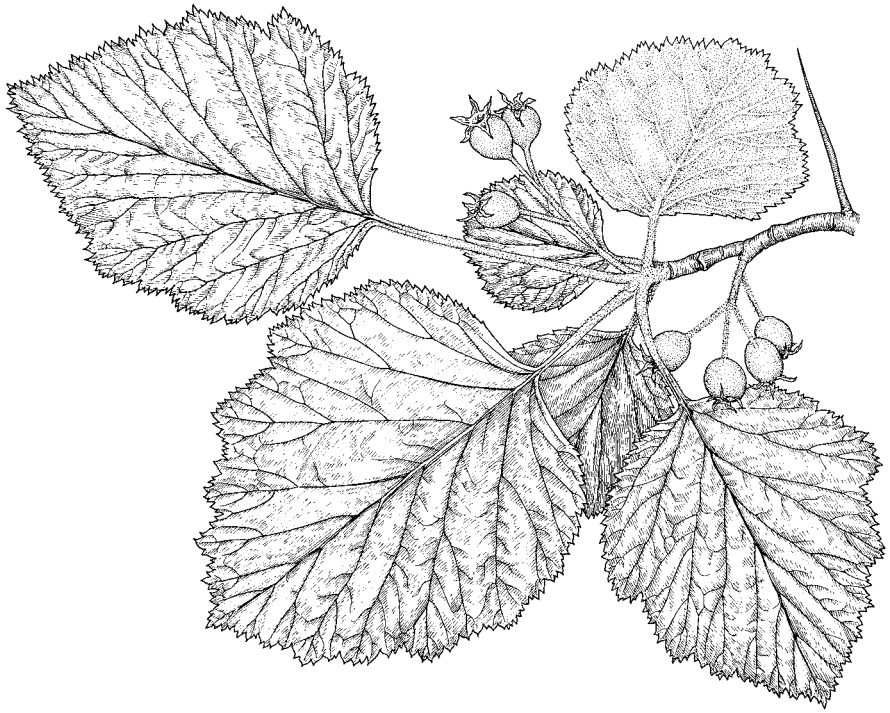
Bark: Reddish-brown to yellowish-brown, shallow grooves and flat-topped, somewhat blocky and flaky ridges

Habitat: Occurs in open woods, along small streams and pastures

Wildlife uses: Food (fruit, leaves and twigs) and cover

Human uses: Landscaping

Interesting fact: Downy hawthorn was approved as the state flower by the 52nd General Assembly of Missouri on March 16, 1923.



Bitternut hickory

Scientific name: *Carya cordiformis*

Growth rate: Fast

Height: Medium tree, up to 70 feet tall

Leaves: Deciduous, alternate, pinnately compound, 6 to 10 inches long, 7 to 9 coarsely serrate leaflets; turning yellow in fall

Flowers: April-May, monoecious; male flowers catkins in clusters of three, 4 to 5 inches long; female yellow, paintbrushlike buds in clusters of 2 to 10 in short spikes

Fruit: September-October, nut, nearly round

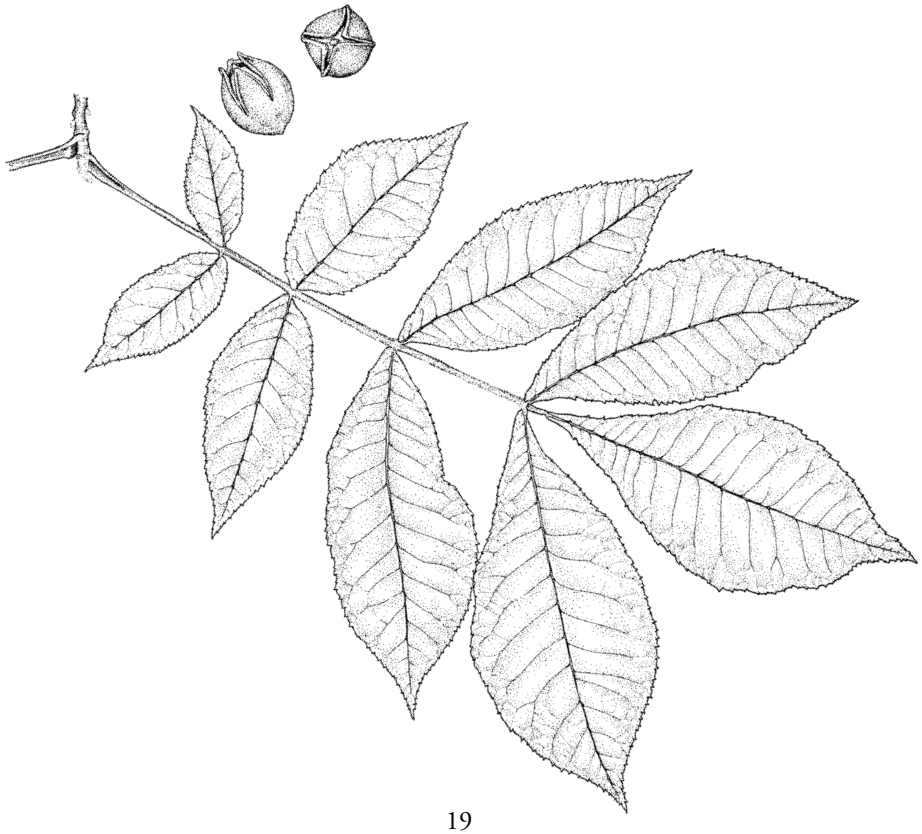
Bark: Grayish-brown, shallow narrow grooves, flat ridges

Habitat: Occurs in low woods along streams and river bottoms and at the bases of mesic (moist) slopes and cliffs

Wildlife uses: Food (nuts and buds)

Human uses: Tool handles; cooking (smoking)

Interesting fact: Bitternut hickory wood is reported to be the best fuel for giving meats the true hickory-smoked flavor.



Mockernut hickory

Scientific name: *Carya tomentosa*

Growth rate: Medium

Height: Large tree, up to 80 feet tall

Leaves: Deciduous, alternate, pinnately compound, 8 to 15 inches long, 5 to 7 leaflets; turning yellow in fall

Flowers: April-May, monoecious; male flowers catkins in clusters of three, 4 to 5 inches long; females clusters of 2 to 10 in short spikes

Fruit: September-October, nut is 1½ to 2 inches long, elliptical with thick husk

Bark: Gray and irregularly furrowed

Habitat: Occurs in dry upland woods on upper slopes and ridges; commonly in acidic soils over chert, sandstone or igneous rock; occasionally in low woods along streams

Wildlife uses: Food (nuts and buds)

Human uses: Tool handles, wood splints and rustic furniture

Interesting fact: Mockernut hickory wood is considered to be the hardest of any tree in the hickory family.

Shagbark hickory

Scientific name: *Carya ovata*

Growth rate: Slow to medium

Height: Medium to large tree, up to 100 feet tall

Leaves: Deciduous, alternate, pinnately compound, 8 to 14 inches long with 5 leaflets; turning yellow in fall

Flowers: April-May, monoecious; male flowers catkins in clusters of three, 4 to 5 inches long; females cluster of 2 to 10 in short spikes

Fruit: September-October, nut is elliptical, ¾ to 1½ inches in diameter in a husk ¼ to ½ inch thick; nutmeat is sweet with good flavor

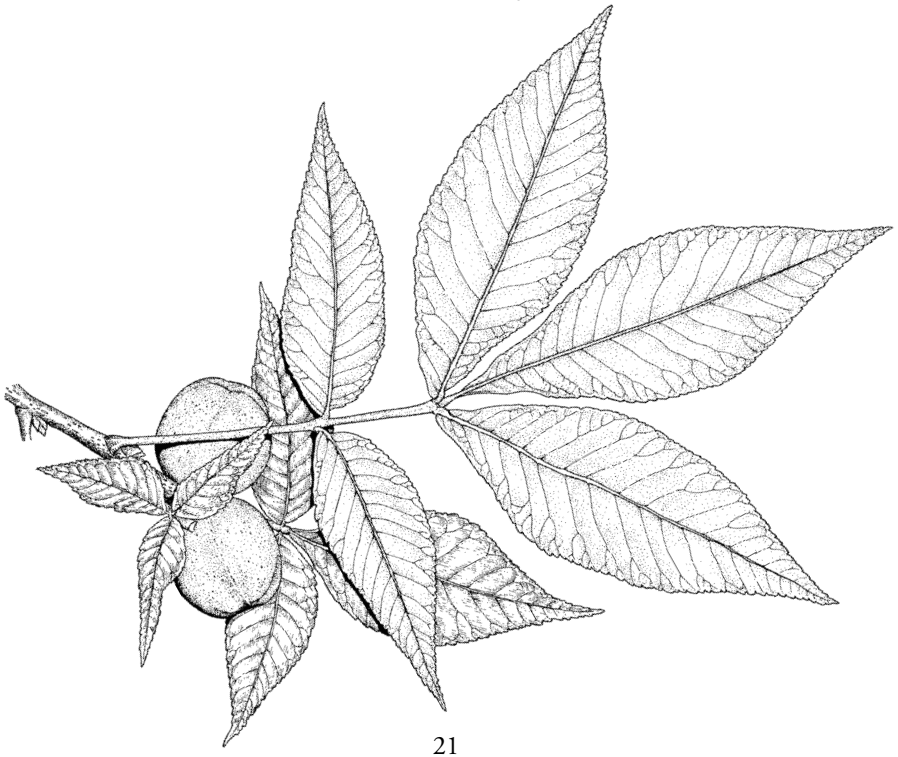
Bark: Gray; separating into l-inch thick, long, shaggy strips; free at one end or both ends and curved outward

Habitat: Occurs in bottomland forests along streams and in upland forests on slopes and ridges

Wildlife uses: Food (nuts), nesting and cover

Human uses: Food (nuts); high-quality charcoal, handles for axes and other tools, athletic goods, agricultural implements, baskets, wagons and wagon wheels

Interesting fact: Because of their loose bark, shagbark and shellbark hickory provide cover for some bats, especially the endangered Indiana bat.



Black locust

Scientific name: *Robinia pseudoacacia*

Growth rate: Medium to fast

Height: Medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, pinnately compound (9 to 19 inches, generally with a terminal leaflet); leaflets oval, ½ to 1¼ inches wide, ½ to 2 inches long; turning yellow in fall

Flowers: May-June, appearing after the leaves, monoecious, perfect, large cluster with individual flowers; white, showy, fragrant

Fruit: September-October, pod, flat, 3 to 4 inches long

Bark: Grayish-brown to black; grooves; narrow, ropelike ridges; inner bark fibrous and yellow to light orange

Habitat: Occurs in bottomlands along streams and their valleys, also upland slopes and open or wooded pastures

Wildlife uses: Food (nectar, leaves, twigs, seeds and seedpods)

Human uses: Landscaping

Interesting facts: Black locust wood is ranked as the seventh hardest of any tree in North America, and it has one of the highest BTU outputs of any tree species in Missouri. Its hardness makes it a favorite material for insulator pins on the cross arms of telephone and power lines. The inner bark can be lethal to livestock.

Honeylocust

Also known as: Thorntree

Scientific name: *Gleditsia triacanthos*

Growth rate: Fast

Height: Medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, bipinnately compound (6-10 inches long, leaflets ½ inch wide, 1¼ inches long), edges irregular; 7 to 15 pairs of leaflets; turning yellow in fall

Flowers: May-June appearing after the leaves, dioecious; male flowers, downy, large, in clusters, 2 to 5 inches long, greenish-white; female flowers in smaller clusters, 2 to 3 inches long, also greenish-white

Fruit: September-October, pod, 6 to 12 inches long, many seeded, often twisted

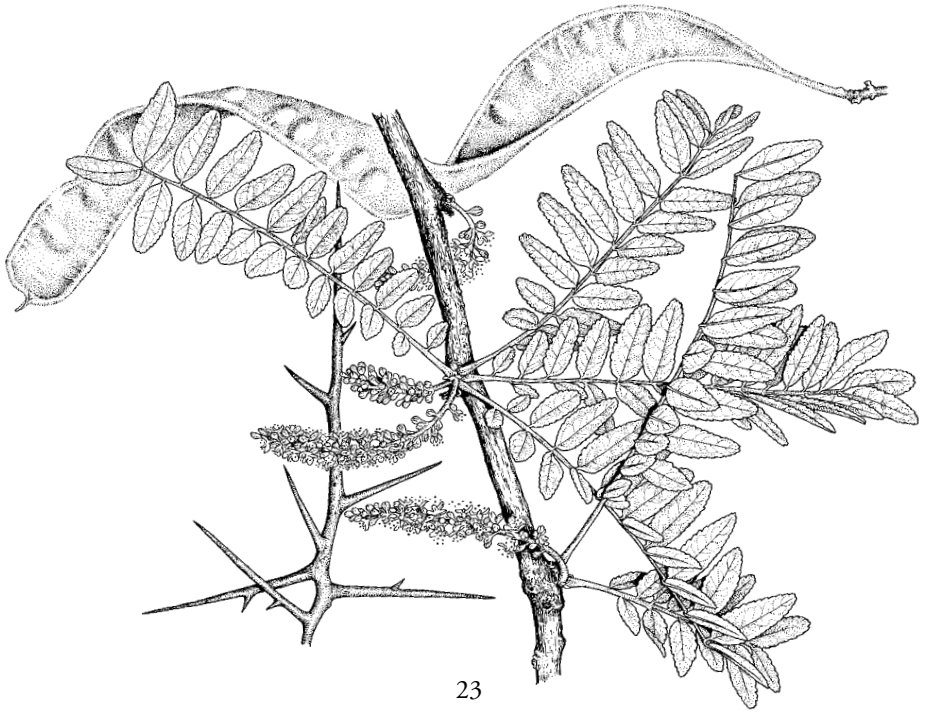
Bark: Grayish-brown to black, deep narrow grooves separating into scaly ridges on older trees; often bearing large, branched thorns; smooth on younger trees

Habitat: Occurs in bottomlands along streams and valleys, also upland slopes and open or woodland pastures

Wildlife uses: Food (nectar, seed pods), dove nesting

Human uses: Thornless cultivars used for landscaping

Interesting fact: Honey locust is a common and troublesome invader of pastures and idle fields and its thorns are notorious for flattening tractor tires.



Red maple

Scientific name: *Acer rubrum*

Growth rate: Medium to fast

Height: Small to medium tree, up to 60 feet tall

Leaves: Deciduous, opposite, simple, orbicular, 3 to 5 triangular lobes, singly or doubly toothed, 2 to 6 inches in both length and width; turning red in fall

Flowers: March-April, appear before the leaves, monoecious, in tassel-like clusters; usually bright red

Fruit: May-June, samara, clusters of seeds with wings up to 1¼ inches long, bound to each other at tip; each pair joined to a long, drooping stem

Bark: Light gray, smooth; becoming darker, furrowed and flaky with age

Habitat: Bottomland forests and edges of streams, swamps and sinkhole ponds; mesic (moist) to dry upland forests; and along bluffs

Wildlife uses: Food (seeds)

Human uses: Landscaping: furniture, veneer, interior finish, flooring, kitchenware, clothes hangers, clothespins, gunstocks, woodenware and pulpwood

Interesting fact: Red maple has the greatest north-south range (New Foundland to Florida) of any tree species living entirely in the Eastern forests.

Silver maple

Also known as: Soft maple

Scientific name: *Acer saccharinum*

Growth rate: Fast

Height: Medium to large tree, up to 100 feet tall

Leaves: Deciduous, opposite, simple, orbicular, 3 to in 6 inches length and width, 5 lobes separated by deep, narrow sinuses; green above, silver beneath, turning yellow in fall

Flowers: January-April, appearing long before the leaves, monoecious; yellow-green to red

Fruit: April-June, samara, two seeds attached to each other at nearly a right angle, up to 3 inches long; largest of the maple seeds

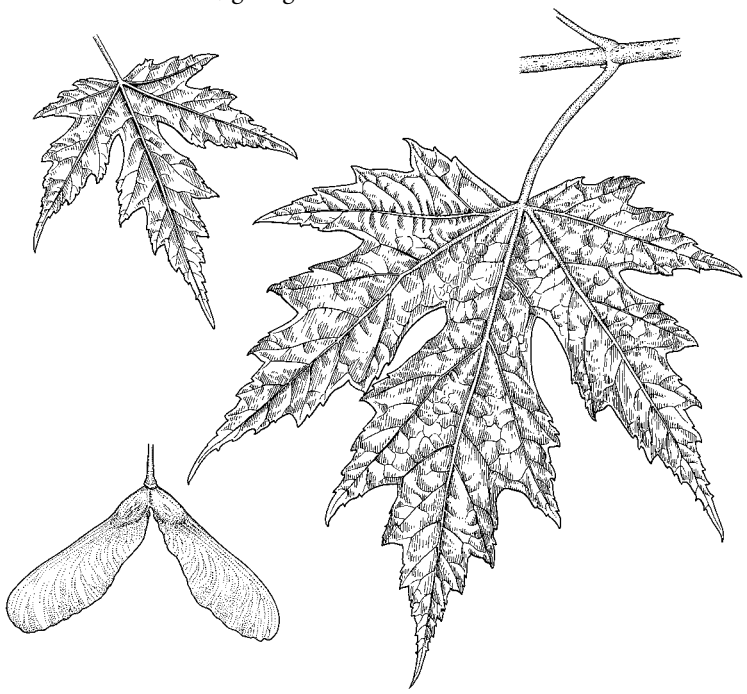
Bark: Light gray, smooth on young trees, later breaking into long thin plates and ridges

Habitat: Bottomland forests, mesic (moist) forests in ravine bottoms, edges of streams and rivers, margins of ponds and lakes; planted around farmsteads and homes

Wildlife uses: Food (seeds), dens

Human uses: Furniture, veneer, pulpwood, woodenware, boxes and crates

Interesting fact: The underside of the silver maple leaf is whitish-silver, and when the wind blows the leaves flutter, giving the tree a silver look.



Sugar maple

Also known as: Hard maple

Scientific name: *Acer saccharum*

Growth rate: Slow to medium

Height: Medium to large tree, up to 90 feet tall

Leaves: Deciduous, opposite, simple, orbicular, 3 to 6 inches long; three prominent lobes on upper half, two smaller lobes at the base; turning brilliant red-orange, to scarlet and yellow in fall

Flowers: April-May, monoecious, perfect, greenish-yellow, ¼ inch or less in length

Fruit: August-October, samara, joined in a horseshoe shape; seeds and wings 1 to 1½ inches long

Bark: Gray and smooth on young trees; on older trees, darker with grooves and irregular scaly plates that look burned because of mold growing on the trunk

Habitat: Mesic (moist) to dry upland forests, margins of glades, ledges, and bases of bluffs and banks of streams

Wildlife uses: Food (seeds, twigs, buds and leaves)

Human uses: Furniture, interior finishing, cabinets, veneer and flooring, bowling pins and butcher blocks

Interesting fact: Sugar maples are widely appreciated for their sugar, syrup and brilliant fall colors, and they are of major economic importance in the Northeastern United States.

Red mulberry

Scientific name: *Morus rubra*

Growth rate: Medium to fast

Height: Medium tree, up to 50 feet tall

Leaves: Deciduous, alternate, simple, ovate or glove-shaped, 2 to 3 lobes, 4 to 8 inches long, 3 to 5 inches wide, coarsely serrate; turning yellow in fall

Flowers: April-May before leaves, primarily dioecious, yellow green, elongated clusters

Fruit: June-August, aggregate; red to purple when ripe

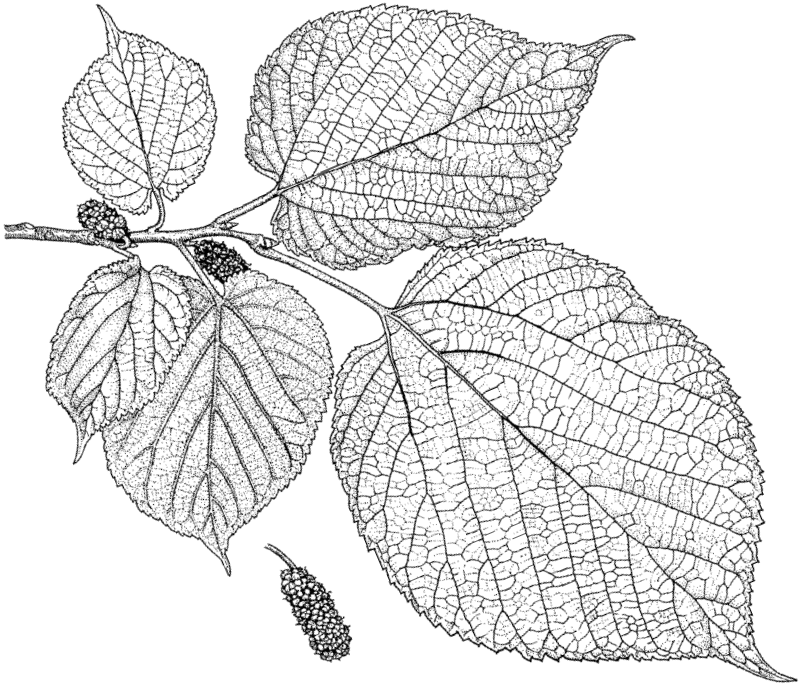
Bark: Thin, dark brown to gray with an orange tint; grooves shallow; ridges narrow, tight or occasionally with loose scales

Habitat: Occurs in moist lowland woods or on moist upland slopes

Wildlife uses: Food (fruits)

Human uses: Food (fruit is made into jams, jellies, pies, drinks or eaten fresh); wood used historically for fence posts and barrel staves

Interesting fact: Red mulberry is the only mulberry native to Missouri.



Black oak

Scientific name: *Quercus velutina*

Growth rate: Slow

Height: Medium tree, up to 70 feet tall

Leaves: Deciduous, alternate, simple, elliptical, up to 12 inches long, 7 to 9 inches wide; upper half much wider than lower, bottom margin of lowest lobe nearly straight; shallow lobes with ends indented into smaller lobes, each bristle-tipped; dark green above, pale green below, turning yellow, red or brown in fall

Flowers: April-May, appear with leaves, monoecious, male 4- to 6-inch catkins; female rust-red, short hairy stalks

Fruit: September-October, acorns solitary or in pairs, cap encloses almost half of the nut

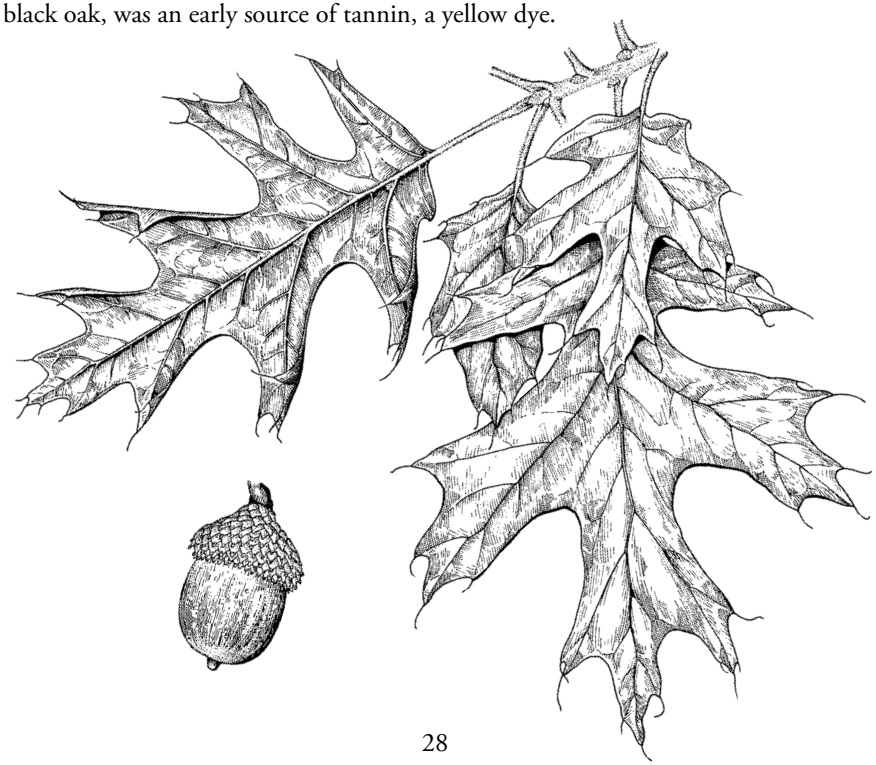
Bark: Black, rough, deeply furrowed; inner bark orange or yellow and can be used to distinguish black oak from scarlet oak and northern red oak

Habitat: Occurs on rocky, sandy or dry upland ridges and slopes; also on sandstone, chert or igneous glades, and borders of woods and fields

Wildlife uses: Food (acorns), dens

Human uses: Furniture, other wood products

Interesting fact: The orange-yellow inner bark, a distinguishing characteristic of black oak, was an early source of tannin, a yellow dye.



Blackjack oak

Scientific name: *Quercus marilandica*

Growth rate: Slow

Height: Small to medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, simple, large, leathery, wedge-shaped to triangular; spreading toward the apex, apex mildly lobed, each lobe carrying one bristle which may disappear with age; dark green and shiny above, turning yellow, red or brown in fall

Flowers: April-May, appear with leaves, monoecious, male 2- to 4-inch catkins; female rust-red, short-stalked spikes

Fruit: September-October, acorns solitary or in pairs, on a very short stalk, ½ inch in diameter with a deep cup covering half the nut

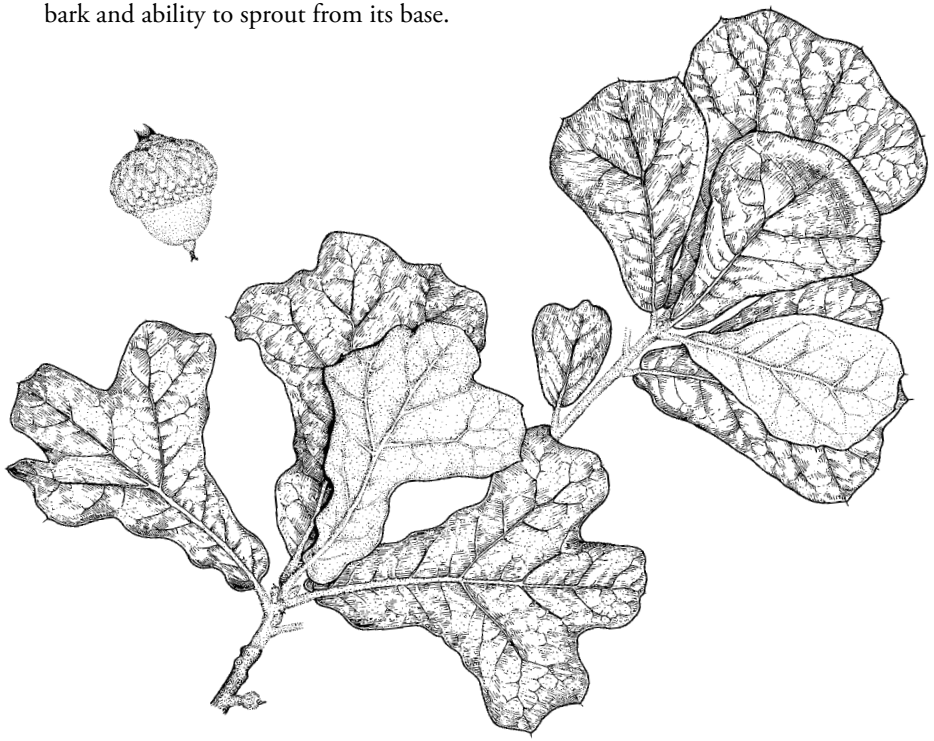
Bark: Nearly black, thick; broken into irregular, rough, blocky plates

Habitat: Occurs in acid soils over sandstone, chert or igneous bedrock, on dry, often level uplands, slopes and glades

Wildlife uses: Food (acorns)

Human uses: Railroad ties, fence posts, charcoal, fuel

Interesting fact: The blackjack oak can withstand fires due to its thick, insulating bark and ability to sprout from its base.



Bur oak

Scientific name: *Quercus macrocarpa*

Growth rate: Medium

Height: Medium to large tree, up to 80 feet tall

Leaves: Deciduous, alternate, simple, largest of any native oak, up to 1 foot long and very wide; two basic shapes (one widest above middle, upper portion shallowly lobed with lower lobes longer; the other has a deeply lobed central section with indentations coming close to the center and a narrower upper part, but still wider than the lower lobes), both shapes found on same tree; turning brown to yellow in fall.

Flowers: April-May, appear shortly after the leaves, monoecious; male green, borne in naked catkins 2 to 4 inches long; female, reddish, appear in single spikes

Fruit: September-October, acorns solitary or in pairs; largest of all North American oaks, about 1½ inches in diameter; surrounded by a deep, scaly cup with a hairy fringe at the rim

Bark: Gray-brown, thick, deeply grooved; ridges long, flat-topped

Habitat: Ozarks: occurs in low woods, valleys, lower slopes and along streams. Northern Missouri: often in woods, valleys to ridge tops and degraded or former savannas

Wildlife uses: Food (acorns), dens

Human uses: Baskets, lumber, ties, fences, cabinets, flooring, furniture, boat decks and fuel

Interesting facts: Bur oak may live as long as 600 years. The very large acorn is reflected in its scientific name, *macrocarpa*, which means "big seed."

Chinkapin oak

Scientific name: *Quercus muehlenbergii*

Growth rate: Slow to medium

Height: Medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, simple; oblong, wider above the middle; 4 to 7 inches long, 1 to 5 inches wide; ending in a pointed tooth (but no bristles), margin coarsely serrated; turning yellow to brown in fall

Flowers: April-May, appear with leaves, monoecious; male catkins yellow-green, 3 to 4 inches long; females very small, green to reddish

Fruit: September-October, acorns solitary or in pairs, small to ¾ inch long; dark chestnut-colored, short-fringed cup covering ⅓-½ of the nut

Bark: Light gray, shallow grooves; short, flaky ridges

Habitat: Occurs most frequently in alkaline, rocky soils derived from limestone or dolomite on bluffs, borders of glades and upland woods; also in floodplain forests and lower slopes along streams

Wildlife uses: Food (acorns)

Human uses: Food (acorns); wood for cabinets, furniture, pallets, fence posts, fuel and railroad ties

Interesting fact: Chinkapin acorns are sweet and edible when roasted.

Northern red oak

Scientific name: *Quercus rubra*

Growth rate: Medium

Height: Medium to large tree, up to 100 feet tall

Leaves: Deciduous, alternate, simple, up to 8 inches long with pointed lobes (which are not divided again at their tips); middle and upper lobes point diagonally upward and have bristle-pointed teeth; yellowish green above, turning red in fall

Flowers: April-May, appear with leaves, monoecious, male 4- to 6-inch catkins; female rust-red, short-stalked spikes

Fruit: September-October, acorns solitary or in pairs, 1 inch long, oblong in shape; flat cup with fine, hairy fringe covering a third of the nut

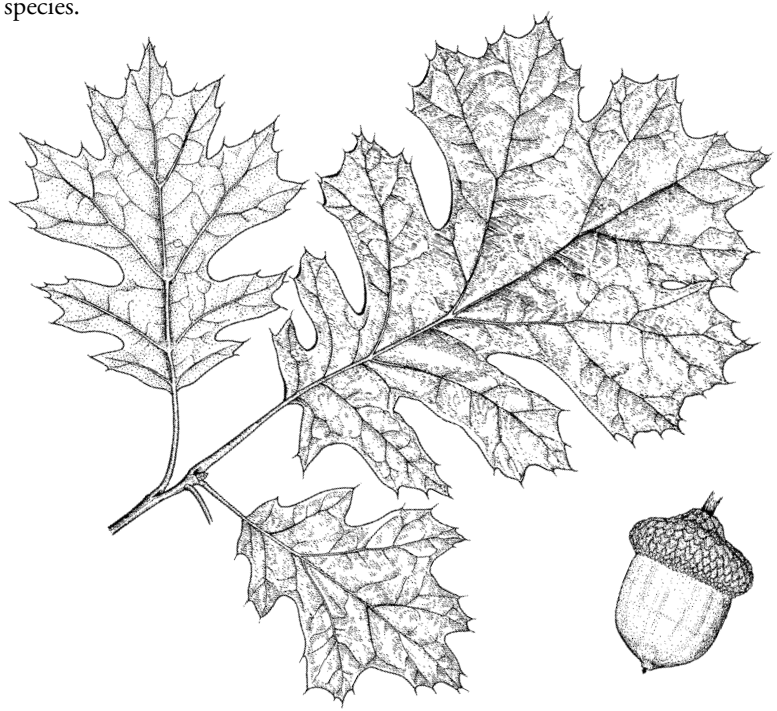
Bark: Dark brown to black, smooth on young trees; eventually develops wide, flat ridges separated by shallow fissures; more narrowly ridged on older trees

Habitat: Occurs in well-drained soils or moist ravines, north and east facing slopes, and on slopes at the bases of bluffs

Wildlife uses: Food (acorns)

Human uses: Furniture, flooring, veneer, interior finishing, railroad ties, posts, general construction and fuel

Interesting fact: Northern red oak grows further north than any other eastern oak species.



Pin oak

Scientific name: *Quercus palustris*

Growth rate: Fast

Height: Medium tree, up to 70 feet tall

Leaves: Deciduous, alternate, simple, 4 to 6 inches long; 5 to 7 lobes (deeply divided) extend ⅔ or more to midrib, ends of lobes have 2 to 3 small divisions, each bristle-tipped; dark green and shiny, turning red to brown in fall

Flowers: April-May, appear with leaves, monoecious, male 4- to 6-inch catkins; female rust-red, short hairy stalks

Fruit: September-October, acorns solitary or in clusters of 2 to 3, rounded, ½ inch diameter, often striped with dark lines; thin, saucer-shaped cup

Bark: Grayish-brown, smooth for many years, branches point down

Habitat: Occurs in bottomland forests and floodplains, along streams, rivers, sloughs, edges of swamps, and around margins of upland sinkhole ponds and flat woods

Wildlife uses: Food (acorns)

Human uses: Fuel, interior finish, shingles and general construction

Interesting fact: Pin oak acorns are an important food source for waterfowl.

Post oak

Scientific name: *Quercus stellata*

Growth rate: Slow

Height: Small to medium tree, up to 70 feet tall

Leaves: Deciduous, alternate, simple; usually with five lobes, two of which are above middle of leaf, broad, forming a cross with the axis of leaf; these and top lobe slightly indented; turning brown in fall; persistent through winter

Flowers: April-May, appear with leaves, monoecious, male 2- to 4-inch catkins; female rust-red, short sessile spikes

Fruit: September-October, acorns small to ¾ inch long; cup covers ⅓ to ½ of nut

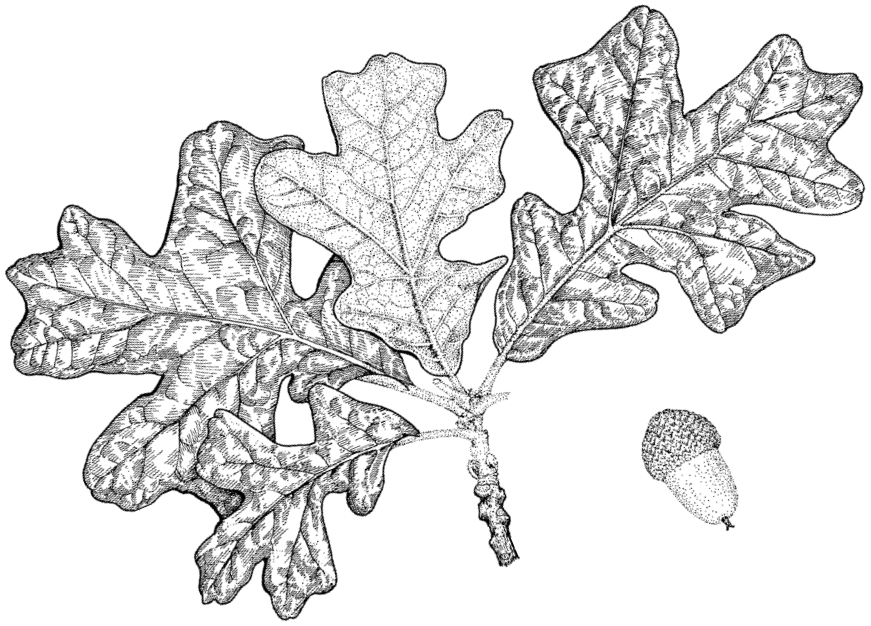
Bark: Light gray, divided by deep fissures and scaly ridges

Habitat: Occurs in dry to rocky upland woodlands and glades; also in flat woods on broad ridges and lowland terraces, where it is typically the dominant tree

Wildlife uses: Food (acorns)

Human uses: Railroad ties, fence posts, furniture, general construction and fuel

Interesting fact: The sturdy, durable post oak got its name from pioneers who used it for fence posts.



Scarlet oak

Scientific name: *Quercus coccinea*

Growth rate: Fast

Height: Medium tree, up to 80 feet tall

Leaves: Deciduous, alternate, simple, 3 to 7 inches long, 2 to 5 inches wide; 7 to 9 deep lobes with wide, nearly circular depressions between the lobes; smooth and dark green above, paler beneath, turning deep scarlet in fall

Flowers: April-May, appear with leaves, monoecious; male 4- to 6-inch catkins, golden; female solitary or in spikes

Fruit: September-October, acorns solitary or paired, up to 1 inch in diameter, often with concentric rings around the tip; thin, bowl-shaped cup encloses ⅓ to ½ of nut

Bark: Gray and smooth, becoming nearly black and rough with age; broken up into irregular ridges on old trees

Habitat: Occurs in acidic soils associated with sandstone, chert or igneous rocks on narrow ridges, slopes and upland woods bordering headwaters of tributary streams

Wildlife uses: Food (acorns)

Human uses: Landscaping, general construction, flooring, pallets and fuel

Interesting fact: Scarlet oak is commonly planted as an ornamental due to its brilliant fall color; however, its large taproot makes it difficult to transplant.

Shingle oak

Also known as: Peach oak or water oak

Scientific name: *Quercus imbricaria*

Growth rate: Medium

Height: Medium tree, up to 80 feet tall

Leaves: Deciduous, alternate, simple, oblong to elliptical, 4 to 6 inches long, ¾ to 2 inches wide (broadest above the middle); only oak with large, entire leaves in Missouri; shiny green above, turning red to brown in fall; has a single bristle at the end of the leaf

Flowers: April-May, appear with leaves, monoecious; males borne on catkins, females borne on spikes

Fruit: September-October, acorn solitary or in pairs; small, about ¾ inch long; nut nearly round; cup with brown, hairy scales enclosing ⅓ to ½ of nut

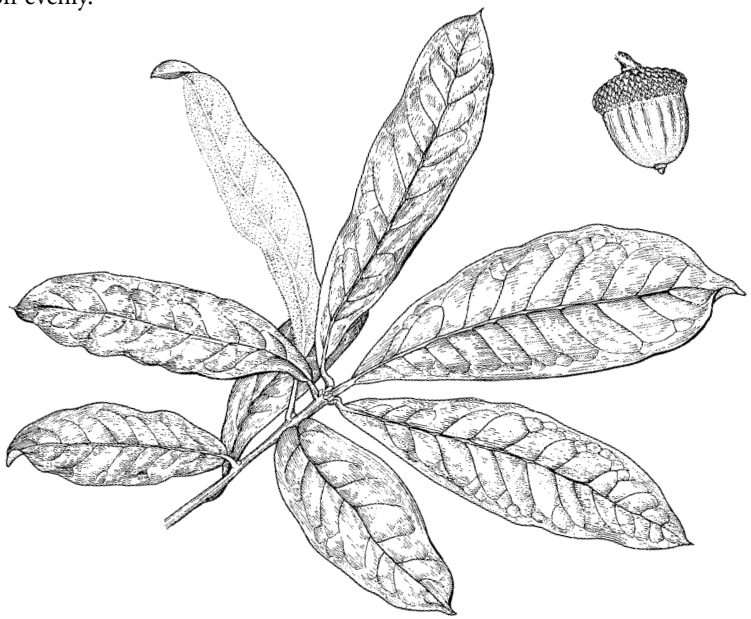
Bark: Smooth gray when young, becoming nearly black with broad ridges and shallow fissures

Habitat: Occurs in upland ridges, slopes, ravines, lowland areas in valleys and along streams and borders of prairies

Wildlife uses: Food (acorns), shelter

Human uses: Roof shingles, some construction and fuel

Interesting fact: Historically, shingle oak was a popular source of shake-type shingles for roofing because the lay of the grain allows the wood to be split or shaved off evenly.



White oak

Scientific name: *Quercus alba*

Growth rate: Slow to medium

Height: Large tree, up to 120 feet tall

Leaves: Deciduous, alternate, simple, 5 to 7 rounded lobes in two distinct forms (one has shallow, wide, rounded lobes; the other has long, narrow, fingerlike lobes with indentations nearly to midrib of leaf), 5 to 9 inches long, 2 to 4 inches wide; turning red to brown in fall

Flowers: April-May, appear with leaves, monoecious; male 2-3 inch catkins, bright yellow; female red, solitary or on spikes

Fruit: September-October, acorns solitary or in pairs, about ¾ inch long; cup covered with warty scales encloses ⅓ of nut

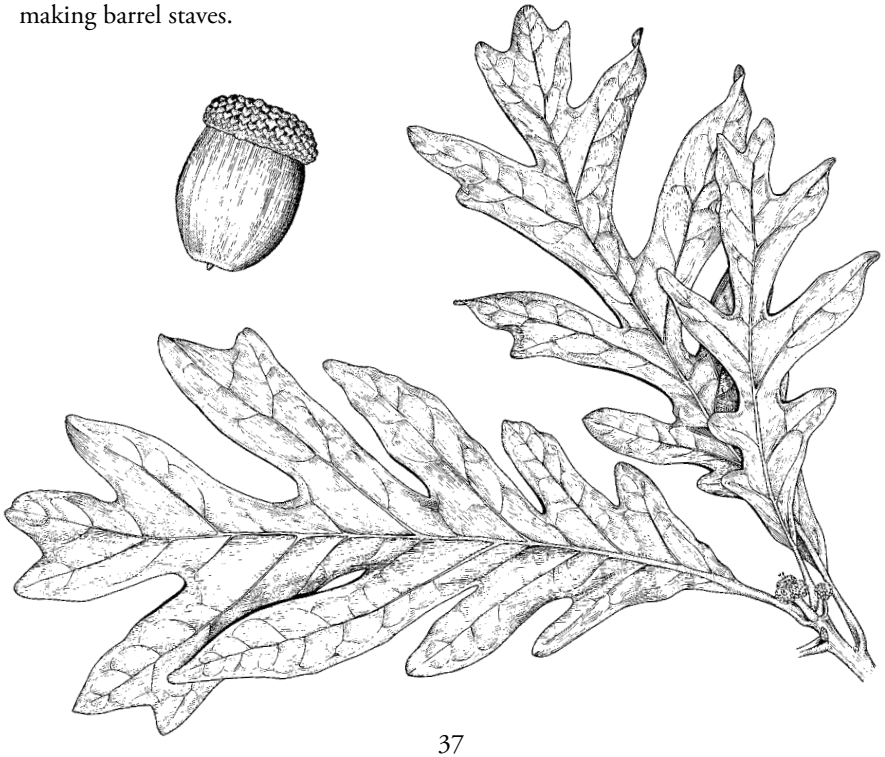
Bark: Light gray; rough with long, loose scales; becoming blocky on very old trees

Habitat: Occurs on dry upland slopes and ridges; also low ground of valleys and ravines

Wildlife uses: Food (acorns)

Human uses: Interior finishing, veneer, cabinets, general construction, fence posts, railroad ties, fuel and tight cooperage (whiskey and wine barrels)

Interesting fact: Second only to walnut in value, white oak is a premium wood for making barrel staves.



Osage-orange

Also known as: Hedge tree, hedge apple tree, bois d'arc

Scientific name: *Maclura pomifera*

Growth rate: Slow

Height: Medium tree, up to 50 feet tall

Leaves: Deciduous, alternate, simple, oval, entire, 3 to 5 inches long, 2 to 3 inches wide; shiny above, turning yellow in fall

Flowers: May-June, dioecious; male flowers dense clusters, light green, 1 to 1½ inches long; female flowers in dense, solitary heads about 1 inch across

Fruit: September-October, aggregate, bright green, round, 4- to 6-inch diameter, uneven surface

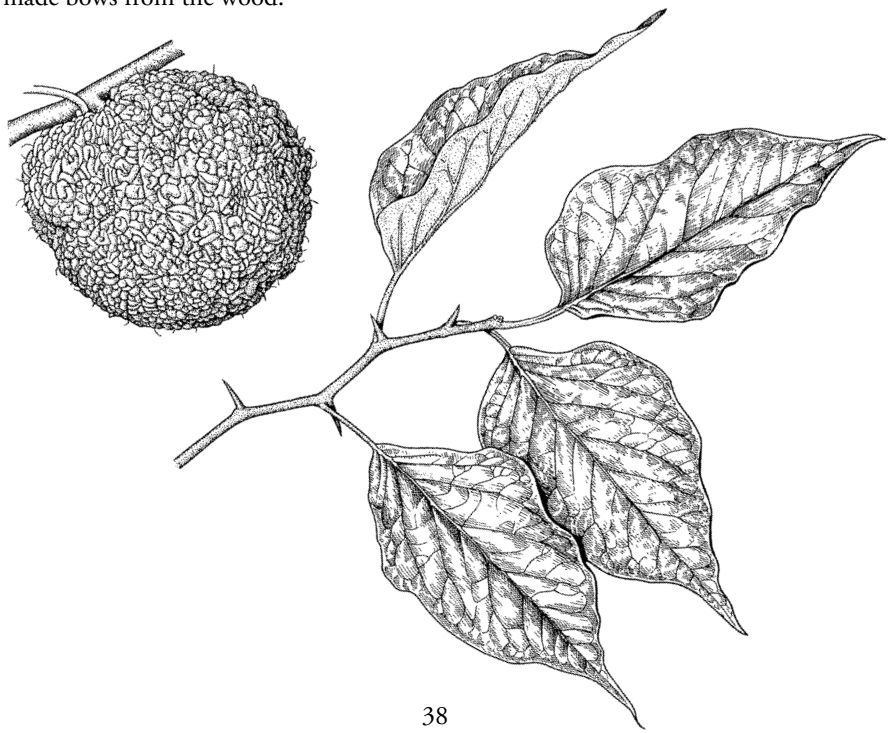
Bark: Brown to orange, deeply grooved with age; ridges rounded, interconnecting, often peeling into long, thin strips

Habitat: Occurs in low woods in valleys, along streams, edge of woods, pastures, fencerows and in thickets

Wildlife uses: Food (seeds)

Human uses: Fruit for source of yellow dye; wood for archery bows, fence posts

Interesting fact: The early French explorers and trappers called the tree "bois d'arc," meaning "wood of the bows," with reference to the fact that the Osage Indians made bows from the wood.



Pawpaw

Scientific name: *Asimina triloba*

Growth rate: Slow

Height: Large shrub to small tree, up to 30 feet tall

Leaves: Deciduous, alternate, simple, reverse ovate, entire, 6 to 12 inches long, 3 to 5 inches wide; turning yellow in fall

Flowers: March-May, appear before leaves, perfect, monoecious; 1½ inches wide; three triangular, green to brownish-purple outer petals on single stalks

Fruit: September-October, drupe, 3 to 5 inches long, 1 to 2 inches wide

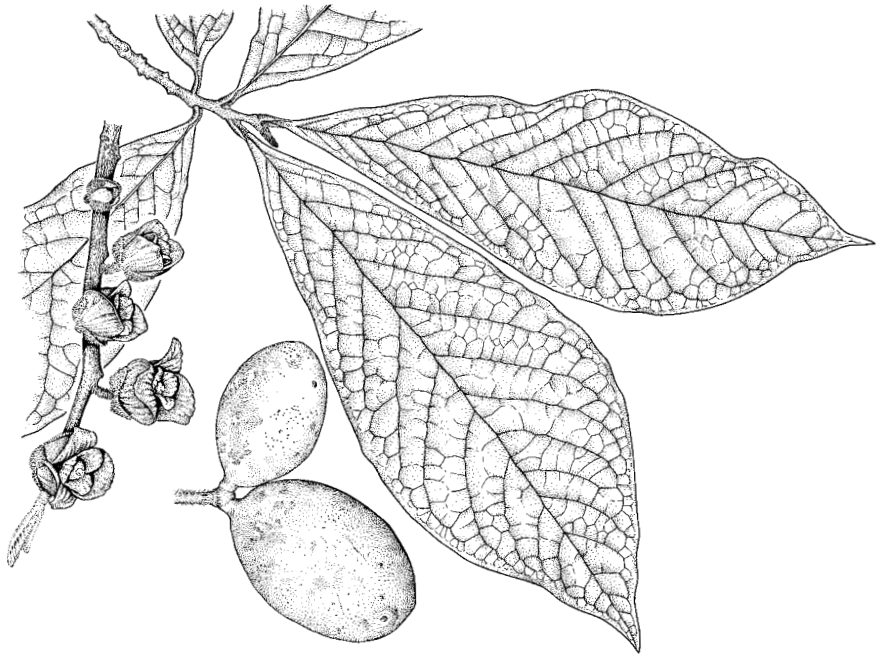
Bark: Light ash to dark brown, thin, smooth, becoming warty with blotches

Habitat: Grows in dense shade on mesic (moist) lower slopes, ravines, valleys, along streams and bases of wooded bluffs in loess hills

Wildlife uses: Food (fruits)

Human uses: Food (fruits)

Interesting facts: Pawpaw extract has been used experimentally in cancer therapy and has been rated 300 times as potent as taxol, the other, better-known plant extract. The fruit is also known as the Ozark banana.



Pecan

Scientific name: *Carya illinoinensis*

Growth rate: Slow to medium

Height: Large tree, up to 100 feet tall

Leaves: Deciduous, alternate, pinnately compound, 12 to 16 inches long, 9 to 17 coarsely or doubly serrate leaflets, each leaflet up to 7 inches long; turning yellow in fall

Flowers: April-May, monoecious; male in 3-branched catkin, 3 to 5 inches long, usually in clusters of 3, yellow; female, hairy, multi-flowered spikes

Fruit: September-October, oblong nut covered with a thin husk in clusters of 3 to 10, 1 to 2 inches long

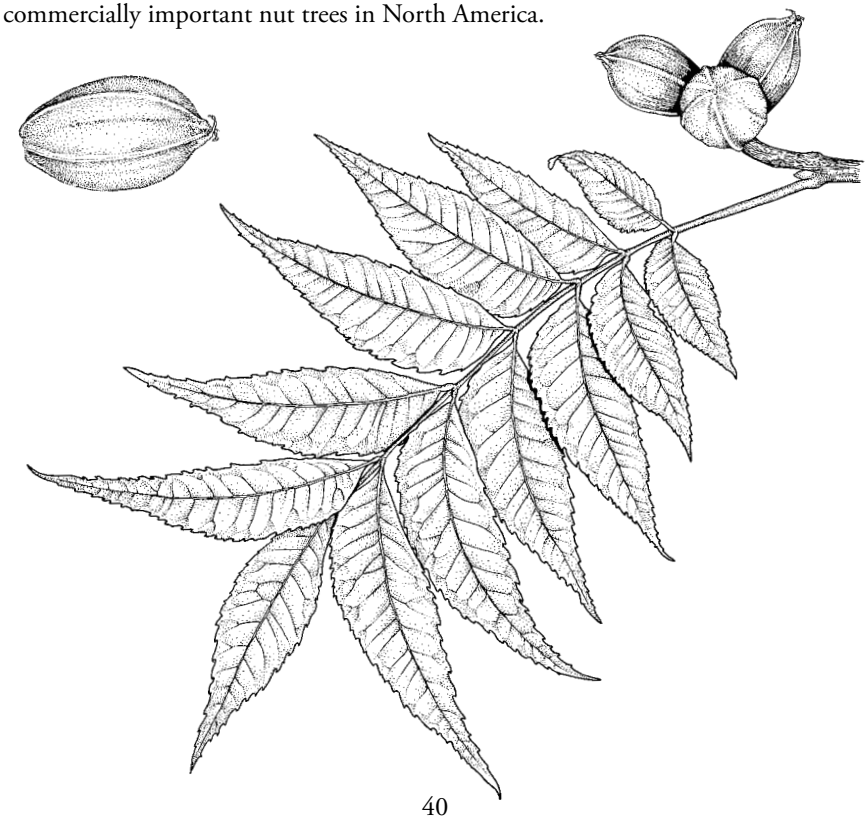
Bark: Grayish-brown to light brown when young, becoming dark reddish-brown with age; ridges long, flat and loose

Habitat: Occurs in rich, moist bottomland soils

Wildlife uses: Food (nuts)

Human uses: Food (nuts); wood for furniture, flooring, cabinets and tools

Interesting fact: Pecan is in the hickory family, and it is one of the most commercially important nut trees in North America.



Persimmon

Scientific name: *Diospyros virginiana*

Growth rate: Slow to medium

Height: Medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, simple, ovate, entire, 4 to 6 inches long, 2 to 3 inches wide; turning deep red to purple in fall

Flowers: Late May-June, dioecious; male fragrant in clusters of 2 to 3; female single on short stalk, white to green-white

Fruit: September to October, berry, round, 1 inch in diameter; yellow-orange, sweet when ripe

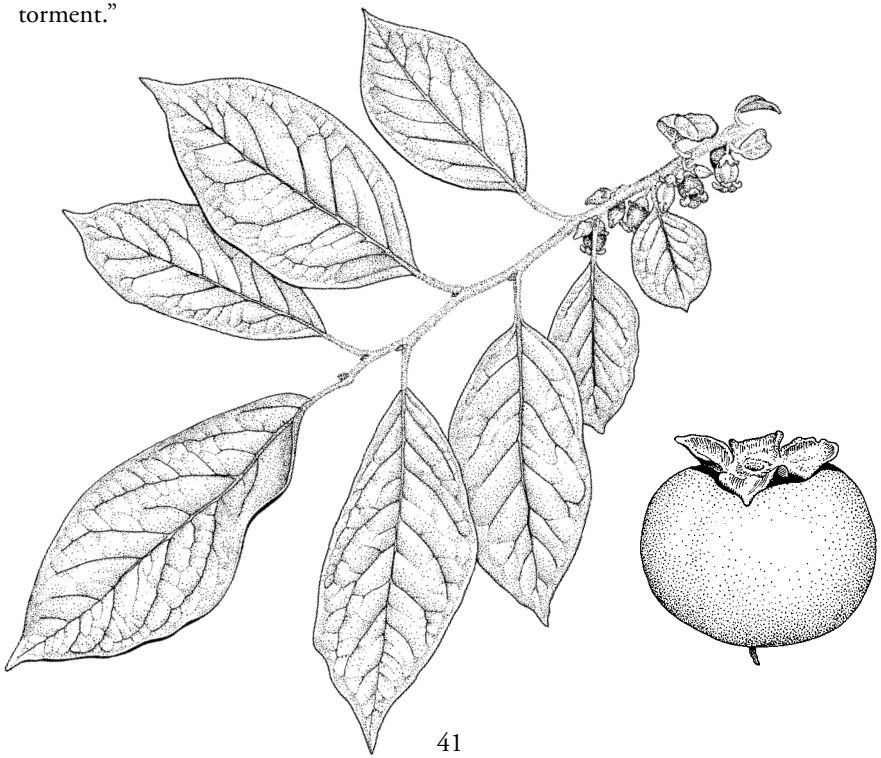
Bark: Dark brown to black, grooves deep; ridges broken into thick, square to rectangular blocks

Habitat: Occurs in rocky, dry open woods, glades, prairies, old fields, thickets, bottomland, valleys and along streams

Wildlife uses: Food (fruit)

Human uses: Fruit (jam, pudding and nutbread); dried leaves for vitamin C-rich tea; wood for golf club heads, textile shuttles, billiard cues and brush handles

Interesting fact: In the 17th century near Jamestown, Captain John Smith wrote of the persimmon fruit: "If it be not ripe, it will draw a man's mouth awrie with much torment."



Shortleaf pine

Also known as: Shortstraw pine, southern yellow pine, yellow pine

Scientific name: *Pinus echinata*

Growth rate: Fast

Height: Large tree, up to 120 feet tall

Leaves: Evergreen, alternate, 2 to 3 needles in bundle, 3 to 5 inches long, dark green year round

Flowers: March-April, male and female cones, monoecious; male cones ¼ inch long in clusters at tip of twigs; females in clusters of 1 to 3 along twig

Fruit: September to October, woody cone, oval, dull brown, 1½ to 2½ inches long, hanging in clusters of one to three; seeds 2 on each scale of cone, triangular, winged, mottled brown-black, ¾ inch long

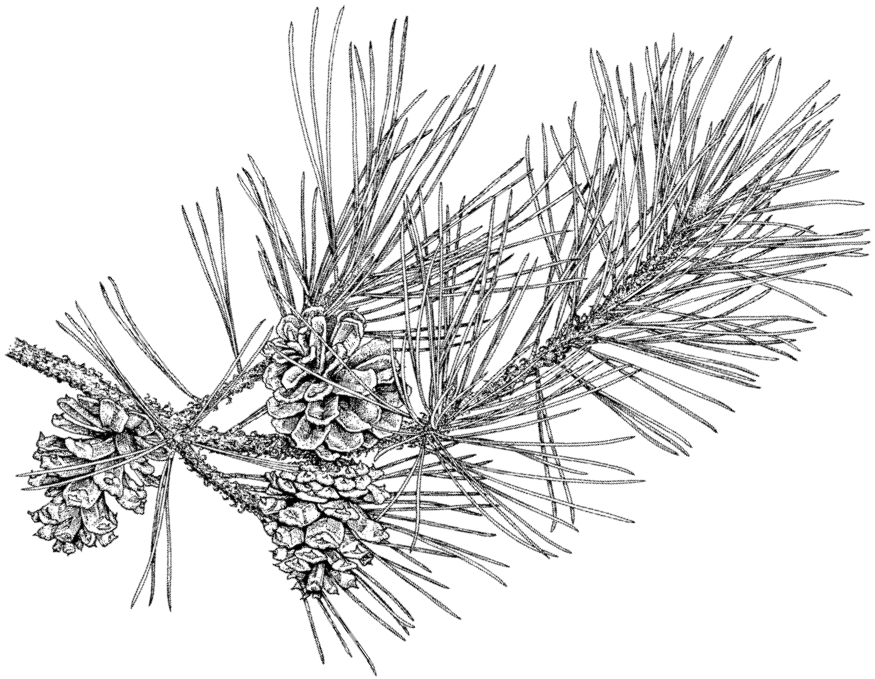
Bark: Reddish-brown to nearly black, thick; broken into large, irregular, scaly plates

Habitat: Occurs in dry upland forests to moist, acidic soils on margins of glades derived from sandstone, chert or igneous substrates; also grown in plantations

Wildlife uses: Food (seeds)

Human uses: General construction, interior and exterior finishing

Interesting facts: Shortleaf pine is the only pine native to Missouri. Its cone is the smallest of the pines and it is one of the few conifers that sprout.



American plum

Also known as: Wild plum

Scientific name: *Prunus americana*

Growth rate: Medium to fast

Height: Shrub to small tree up to 20 feet tall

Leaves: Deciduous, alternate, simple, oval, doubly serrate, 2½ to 4 inches long; rounded base; long, pointed apex; turning red or yellow in fall

Flowers: April-May, clusters of 2 to 5, 1-inch diameter, fragrant; white

Fruit: July-September, berry, clusters of 15 to 30 fruits, round, ¾ to 1 inch in diameter, outer skin tough; pulp, soft, red or yellow

Bark: Dark brown to reddish; breaking into thin, long scaly plates

Habitat: Occurs in woodlands, pastures and thickets throughout Missouri

Wildlife uses: Food (fruits), cover

Human uses: Food (jellies and preserves, fresh or cooked)

Interesting fact: American plum is noted for forming thickets that provide good wildlife cover, including food from its fruit.

Yellow poplar

Also known as: Tulip tree; tulip poplar

Scientific name: *Liriodendron tulipifera*

Growth rate: Medium

Height: Large tree, up to100 feet tall or higher

Leaves: Deciduous, alternate, simple, 4 to 6 inches long; apex broad, notched with wide "V" shape between lobes at apex, entire; shiny, dark green above, light green to whitish beneath, turning yellow in fall

Flowers: May-June, large, 3 inches long, 2½ inches wide, cup-shaped; 6 yellow-green petals, orange inside

Fruit: September-October, brown, woody, cone-shaped, 2 to 3 inches long, containing numerous winged seeds

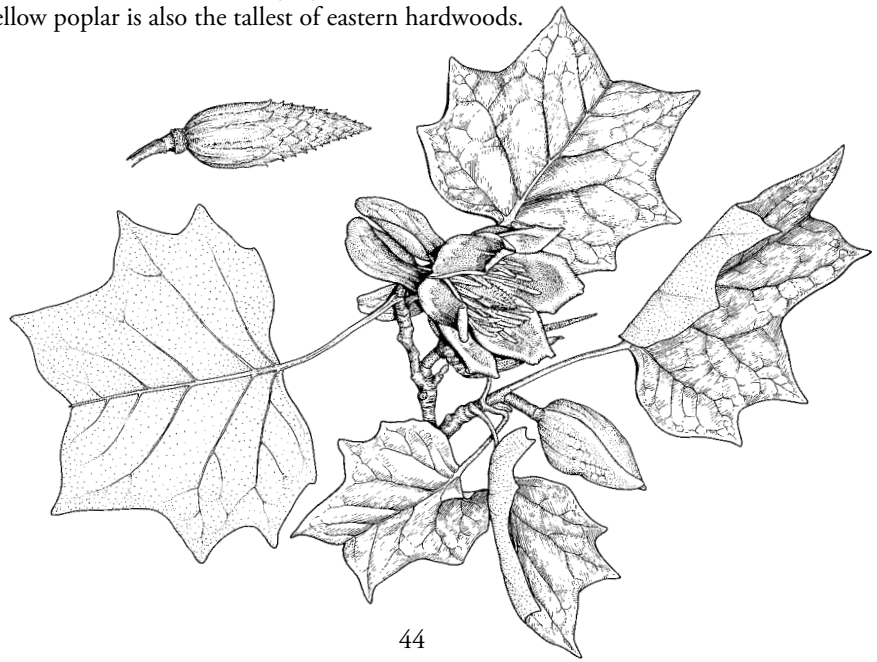
Bark: Tight and gray at first, thin, often with white spots; later gray to brown with rounded ridges and long, deep grooves

Habitat: Occurs in moist woods of ravines, in upland woods and along streams of Crowley's Ridge; also found at the base of wooded bluffs along the Mississippi River in southeastern Missouri

Wildlife uses: Food (seeds, leaves, nectar) and nesting

Human uses: Veneer, plywood, boxes, crates, furniture, cabinets, musical instruments, toys and novelties

Interesting facts: Daniel Boone used a yellow poplar to build a 60-foot long canoe to carry his family and belongings down the Ohio River from Kentucky to Missouri. Yellow poplar is also the tallest of eastern hardwoods.



Eastern redbud

Scientific name: *Cercis canadensis*

Growth rate: Medium to fast

Height: Shrub or small tree, up to 40 feet

Leaves: Deciduous, alternate, simple, cordate, 2 to 6 inches long, apex pointed, base heart-shaped, entire; dark green above, light green beneath, turning yellow in fall

Flowers: March-May before leaves, purplish-red in clusters

Fruit: September-October, flat pods, 2 to 4 inches long, about ½ inch wide, tapered at both ends, brownish-purple; containing several beanlike, dark brown seeds; persistant

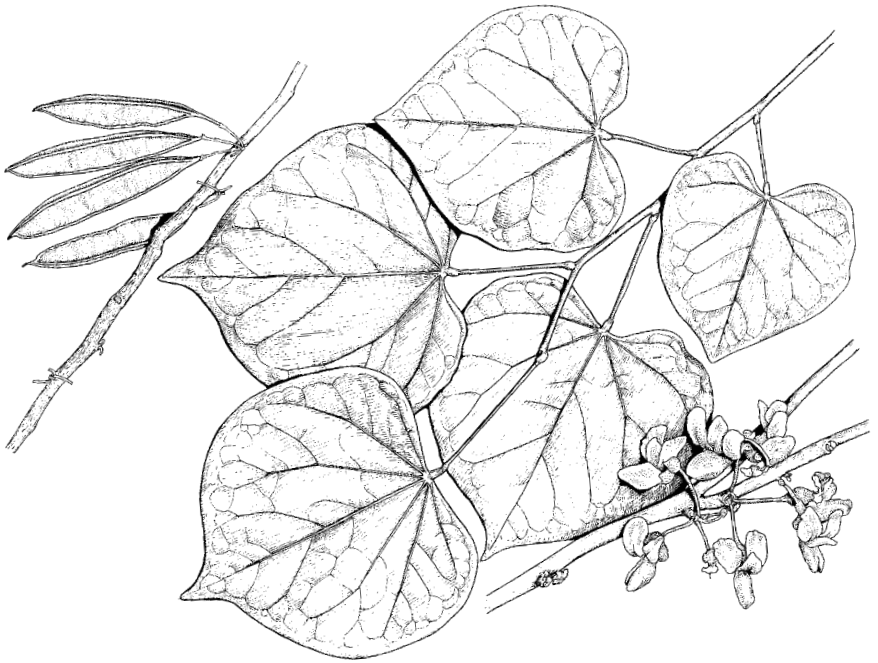
Bark: Reddish-brown to gray; thin and smooth when young, changing to long grooves and short, thin, blocky plates with age

Habitat: Found in open woodlands, borders of woods, thickets, dolomite glades, and along rocky streams and bluffs; occurs in every county in Missouri

Wildlife uses: Food (seeds, leaves and nectar)

Human uses: Landscaping, food and flowers

Interesting fact: Eastern redbud flowers are sometimes used raw or pickled in salads; in Mexico they are fried.



Sassafras

Scientific name: *Sassafras albidum*

Growth rate: Fast

Height: Small-to-medium tree, up to 60 feet tall

Leaves: Deciduous, alternate, simple, three different shapes (three-lobed, two-lobed and oval with no lobes), 4 to 6 inches long, 2 to 4 inches wide, leaf margins entire; bright green above, lighter green beneath, turning orange and red in the fall

Flowers: April-May, before the leaves emerge, dioecious; light fragrance, yellow

Fruit: August-October, drupe, dark blue

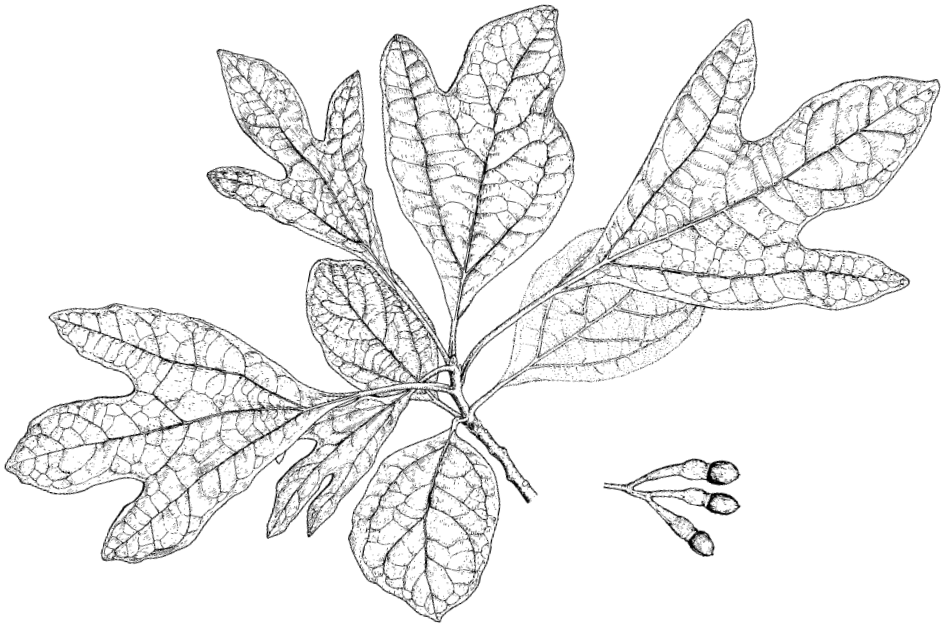
Bark: Reddish-brown to gray; deep grooves and firm, long, flat-topped ridges; mottled twigs (camouflagelike pattern); aromatic

Habitat: Occurs on the border of dry woods, glades, prairies, and in bottomland soils in valleys; also along roadsides, railroads, idle fields, pastures, fencerows and thickets

Wildlife uses: Food (fruit and leaves)

Human uses: Posts, rails, buckets, carving, canoe paddles, cabinets and interior finish

Interesting fact: Traditionally, sassafras tea was a popular beverage brewed from the roots, which have a strong aroma of root beer. However, safrole, the oil found in sassafras, has been found to be carcinogenic. In 1976 the U. S. Food and Drug Administration banned the oil for commercial sale and advised the public to stop drinking tea made from sassafras root.



Downy serviceberry

Also known as: Shadbush, amelanchier

Scientific name: *Amelanchier arborea*

Growth rate: Slow to medium

Height: Variable from shrub to small tree, up 30 feet tall

Leaves: Deciduous, alternate, simple, oval, 2 to 4 inches long, serrate, base rounded or slightly indented near the stalk; dark green above, lighter beneath, turning yellow to orange-red in fall

Flowers: March-May before the leaves, monoecious, ½ inch long, showy white petals in drooping clusters

Fruit: June-July, small, dark red, berrylike clusters

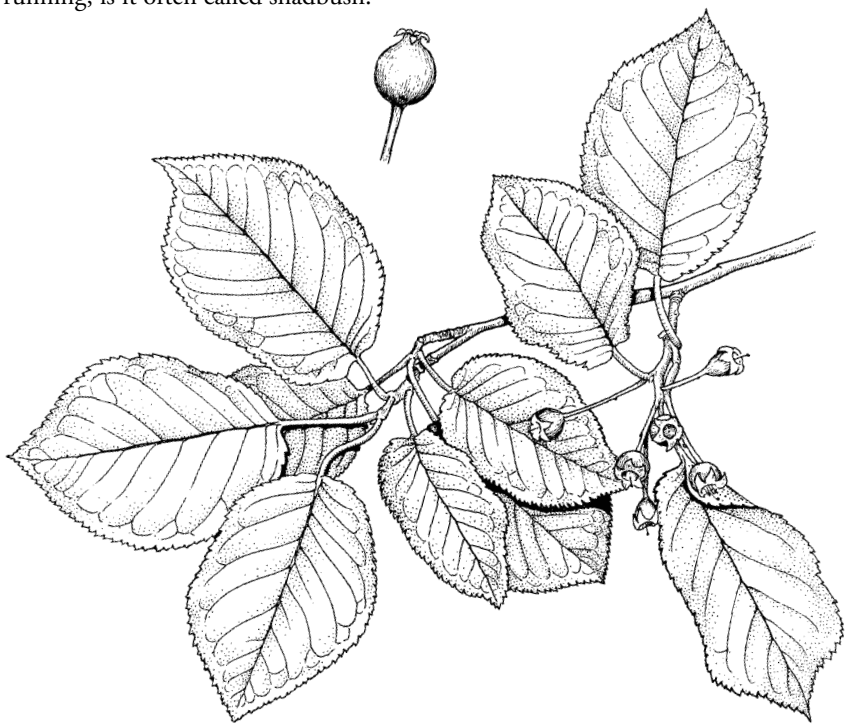
Bark: Light gray and smooth when young, becoming dark gray with shallow grooves and long ridges

Habitat: Open rocky woods and bluffs, usually on well-drained slopes

Wildlife uses: Food (fruit, twigs and leaves)

Human uses: Landscaping and food (fruit can be eaten raw or cooked in pies, puddings or muffins)

Interesting fact: Because downy serviceberry is said to bloom when the shad are running, is it often called shadbush.



American sycamore

Also known as: Buttonwood

Scientific name: *Platanus occidentalis*

Growth rate: Fast

Height: Large tree, up to 120 feet tall

Leaves: Deciduous, alternate, simple, orbicular, 3 to 5 main lobes, entire to toothed, 4 to 8 inches long and wide; yellow-green above, pale beneath, turning dull tan in fall

Flowers: April-June, monoecious; male flowers dark red in short clusters; female flowers green to red in ball-like clusters

Fruit: September-October, aggregate, light brown, round composition of many seeds

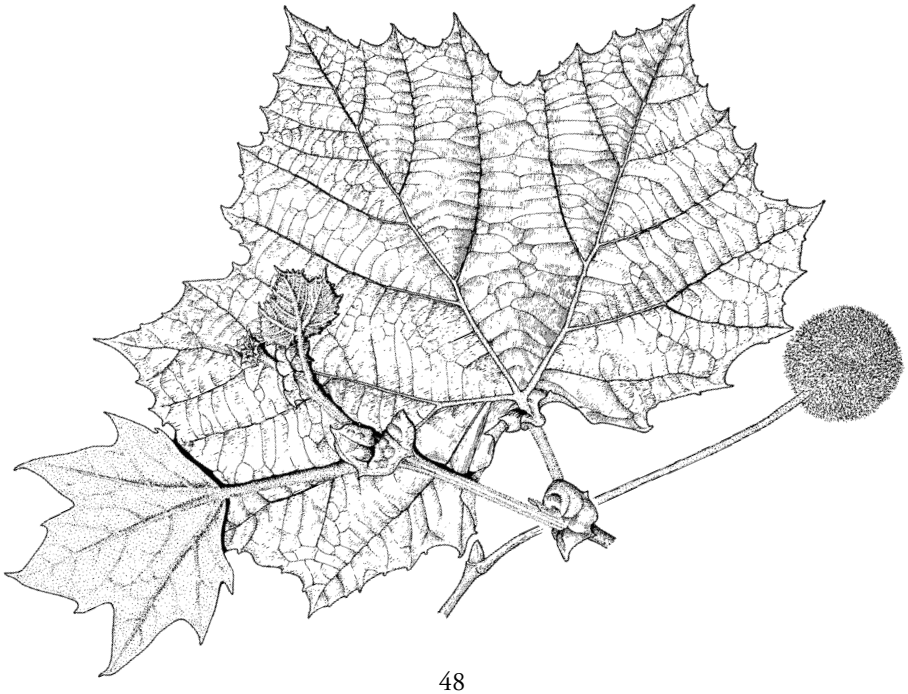
Bark: Reddish-brown to gray; bark on upper limbs scaling off in thin plates to reveal the conspicuous white new bark

Habitat: Occurs on rich flood plains, wet soils of streams and river banks

Wildlife uses: Food (seeds), nesting, dens

Human uses: Crates, interior finishing and furniture; difficult to split, used for butcher blocks and buttons, hence the common name "buttonwood"

Interesting fact: About 98 percent of the great blue heron rookeries in Missouri are found in the huge, open, horizontal limbs of American sycamore trees.



Sweetgum

Also known as: Gumball tree; gum tree

Scientific name: *Liquidambar styraciflua*

Growth rate: Medium

Height: Large tree, up to 130 feet tall

Leaves: Deciduous, alternate, simple, orbicular; star-shaped, with 5 lobes, lobes pointed; 3 to 6 inches long, 3 to 6 inches wide, margin toothed; soft green above and beneath, turning to red and yellow in fall

Flowers: April-May, appearing with emerging leaves, monoecious; male green, upright: females green, on a slender stalk with a round cluster about ½ inch in diameter

Fruit: September-October, aggregate; tight cluster of seed capsules in spiny, round 1 to 1¼ inch drooping brown ball

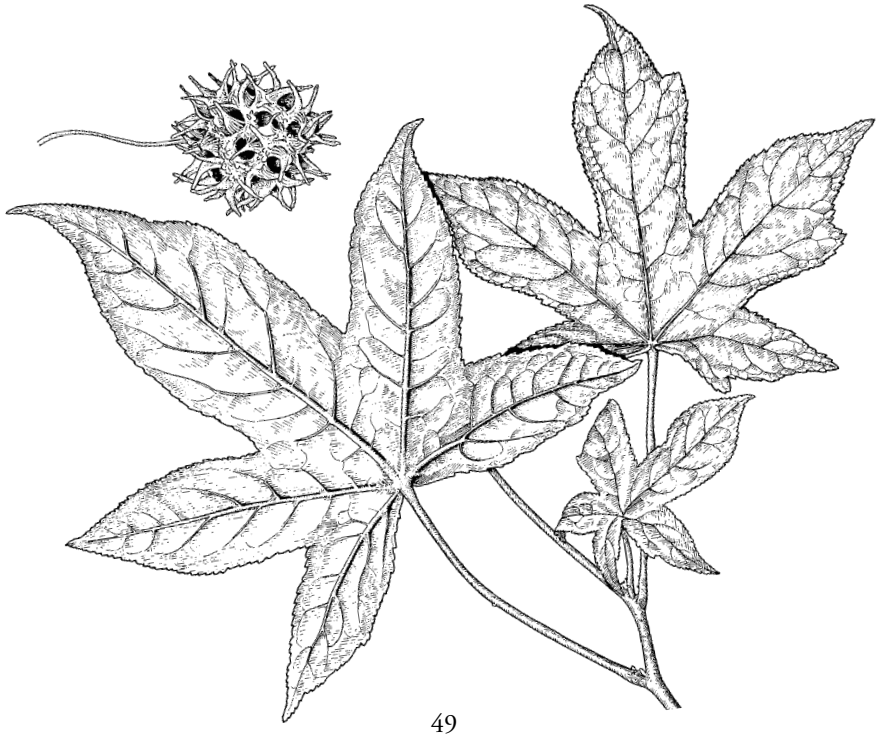
Bark: Brown to gray; very rough with deep grooves and narrow, slightly scaly ridges

Habitat: Occurs in rich, moist bottomland soils in valleys and along streams

Wildlife uses: Food (seeds)

Human uses: Flooring, furniture, veneer, cabinets and musical instruments

Interesting fact: Before the appearance of chewing gum, American children chewed the sweet, gummy sap of sweetgum.



Black walnut

Scientific name: *Juglans nigra*

Growth rate: Slow to medium

Height: Large tree, up to 90 feet tall

Leaves: Deciduous, alternate, pinnately compound, 12 to 24 inches long; 9 to 25 leaflets, lanceolate, 3 to 5 inches long, serrate, base round, apex long-pointed, slightly hairy; dark shiny green above, lighter green beneath, turning yellow in fall

Flowers: April-May, monoecious, but maturing at different times; male on previous year's twigs, flowers in catkins 3 to 5 inches long among new leaves; female flowers on short spikes

Fruit: September-October, nut, thick green or brown husks, 1½ to 2½ inches diameter, deeply ridged

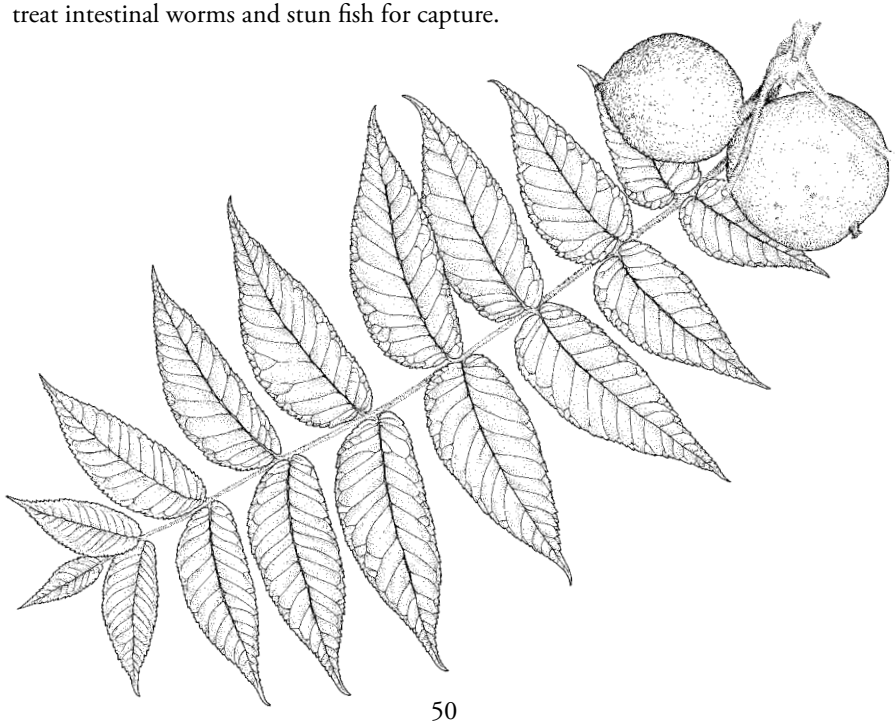
Bark: Dark brown to black, deeply furrowed ridges, slight diamond pattern, inner bark chocolate brown

Habitat: Occurs in moist woods at the bases of slopes or bluffs, in valleys along streams, and in open and upland woods

Wildlife uses: Food (nuts); preferred host by caterpillars of the luna and regal moths

Human uses: Food (nuts); wood for cabinets, veneers, furniture, interior finishing and gunstocks

Interesting fact: Black walnut husks were used by Native Americans to dye cloth, treat intestinal worms and stun fish for capture.



Black willow

Scientific name: *Salix nigra*

Growth rate: Fast

Height: Medium to large tree, up to 100 feet tall

Leaves: Deciduous, alternate, simple, lanceolate, 3 to 6 inches long, ⅜ to ¾ inch wide, base round to pointed, apex long-pointed, serrate; smooth green above, light green beneath, turning yellow in fall

Flowers: April-May, appearing with leaves, monoecious; catkins 1-3 inches long

Fruit: May-June, pod, light brown capsules about ⅛ inch long

Bark: Dark brown; long narrow, loose ridges on younger trees; rough, deeply grooved and shaggy on older trees

Habitat: Occur along streams, swamps, sloughs, marshes, ponds and wetlands

Wildlife uses: Food (twigs, leaves, shoots, buds, bark, nectar) and cover

Human uses: Trees for river and stream-bank stabilization; branches for wickerwork baskets and furniture; wood for pulp, charcoal, veneer, flooring, boxes and crates

Interesting fact: Black willow ranks as one of the largest willow species in the world, reaching heights of over 100 feet in southern states.

Appendices

Appendix A: Dichotomous key

For winter tree and twig identification, see *A Key to Missouri Trees in Winter: An Identification Guide* by Jerry Cliburn and Ginny Wallace (available via Missouri Department of Conservation's Nature Shop at www.mdcnatureshop.com).

1. a. Leaves needle- or scalelike, or evergreen, or have vertically fibrous bark ..... go to 2
   b. Leaves broad and flat, or not as described above ..... go to 4

2. a. Leaves scalelike; bark fibrous; tree shape pyramidlike; may have blue berries ..... eastern redcedar
   b. Leaves more needlelike ..... go to 3

3. a. Leaves individually attached to branch ..... bald cypress
   b. Leaves in bunches of 2-3 needles ..... shortleaf pine

4. a. Leaves or leaf scars arranged oppositely on branch (ash, maple) ..... go to 5
   b. Leaves or leaf scars arranged alternately on branch (oak, hickory) ..... go to 12

5. a. Leaf simple (maple, etc.) ..... go to 6
   b. Leaf compound (ash, hickory, etc.) ..... go to 9

6. a. Leaf entire with point at apex; small tree with bark in squares; end of branches curl up toward sky ..... flowering dogwood
   b. Leaf with lobes ..... go to 7

7. a. At least 5 lobes; deep, narrow sinuses; silver beneath ..... silver maple
   b. Three to 5 lobes ..... go to 8

8. a. Three triangular lobes near apex of leaf; red petiole ..... red maple
   b. Three prominent lobes near apex, 2 near base; buds pointed, shiny brown ..... sugar maple

9. a. Twigs bright green, smooth; leaflets 3-5 per leaf; seed winged ..... boxelder
   b. Twigs thick but not green ..... go to 10

10. a. Leaf palmately compound; seed nutlike ..... Ohio buckeye
    b. Leaf pinnately compound; seed winged ..... go to 11

11. a. Dry site; leaflets entire or serrate, lighter beneath; leaf scar horseshoe-shaped ..... white ash
    b. Wet site; leaflets finely toothed; leaf smaller overall than white ash; leaf scar shield-shaped ..... green ash

12. a. Leaves compound; or twigs generally very thick (Kentucky coffeetree, pecan, hickory, locust, walnut) ..... go to 13
    b. Leaves simple; or twigs are generally thinner (oak and others) ..... go to 20

13. a. Leaves doubly compound; bark more smooth or platy than furrowed ..... go to 14
    b. Leaves singly compound; bark more furrowed ..... go to 15

14. a. No thorns; leaflets pointed at apex, egg-shaped; twigs stout and gray; pod smooth flat, 6 inches ..... Kentucky coffeetree
    b. Thorns; leaflets oblong or spear-shaped; twigs slender and zigzag; pods wrinkled, 12 inches ..... honey locust

15. a. Leaflets with points on lobes; bark more furrowed or patterned ..... go to 16
    b. Leaflets elliptical, round at base and apex; barklike, interlacing fibrous ridges; small spines at base of bud, 11-19 leaflets ..... black locust

16. a. Leaflets finely toothed; 11-23 leaflets; bark deeply furrowed (pecan, walnut) ..... go to 17
    b. Leaflets serrated, more broadly elliptical; 5-11 leaflets; bark more tightly furrowed or in strips (hickory) ..... go to 18

17. a. Leaflets more sickle-shaped; single leaflet at apex of leaf; bark reddish brown and scaly, tan beneath ..... pecan
    b. Leaf generally missing terminal leaflet; bark dark brown, diamond-patterned, chocolate beneath; pith chambered ..... black walnut

18. a. Buds egg-shaped and large; bark scaly or furrowed ..... go to 19
    b. Buds long and slender, bright yellow; bark smooth (or shallow fissures on older trees) ..... bitternut hickory

19. a. Five leaflets, elliptical; bark light gray, smooth to shaggy plates ..... shagbark hickory
    b. Seven to 9 leaflets, broadly elliptical, smelly; leaf axis hairy; bark shallow furrows ..... mockernut hickory

20. a. Leaves entire, without spines at apex ..... go to 21
    b. Leaves serrate, toothed or multi-lobed ..... go to 27

21. a. Leaf generally with no lobes, but may have leaves with 2 or 3 lobes; lemon smell when crushed; mottled green twig ..... sassafras
    b. Leaf not as above and twig not mottled green ..... go to 22

22. a. Leaf with a heart-shaped base; pods; twigs zigzag near ends ..... redbud
    b. Not as described above ..... go to 23

23. a. Leaf broad with a V-shaped notch at the apex; bark light and tight ..... yellow poplar
    b. Leaf without notch at apex ..... go to 24

24. a. Leaf broadly oval, almost round, with long pointed tip; bark grooved, exposing range color; twigs with thorns; seeds large green balls ..... Osage orange
    b. Leaf not as above ..... go to 25

25. a. Leaf oblong, nearly as wide at base as at apex; slender twigs; bark black in square blocks ..... persimmon
    b. Leaf broadest above middle; bark more gray and furrowed or smooth ..... go to 26

26. a. Leaf 6-12 inches long, 3-4 inches wide; bark brown, thin and warty ..... pawpaw
    b. Leaf 2-6 inches long, 1-2 inches wide; twigs tend to branch at 90° angle; bark gray to darker, thick, long squares ..... blackgum

27. a. Leaf serrate with no lobes ..... go to 28
    b. Leaf lobed, toothed or sometimes coarsely serrate ..... go to 35

28. a. Leaf 3-5 times longer than wide; slender twigs; bark dark brown, deeply furrowed ..... black willow
    b. Leaf no more than 2-3 times longer than wide ..... go to 29

29. a. Leaves 2-6 inches long, 1-2½ inches wide; bark with horizontal lenticels ..... go to 30
    b. Leaf broader, more irregular or bark without obvious horizontal lenticels ..... go to 31

30. a. Leaf smooth and shiny above, often with rusty hairs along midrib below; single stem ..... black cherry
    b. Leaf slightly rough and dull above; some branches become thorns; multi-stemmed in thickets ..... American plum

31. a. Leaf almost wedge-shaped; serration can resemble teeth or lobes occasionally; bark peels into papery strips revealing pinkish inner bark ..... river birch
    b. Leaves not as above ..... go to 32

32. a. Leaves less than 4 inches long or symmetrical; sickle shaped; very distinctive bark ..... go to 33
    b. Leaves at least 4 inches long, doubly serrate; bark less distinctive ..... go to 34

33. a. Leaf small, oval, finely toothed; bark smooth gray and white splotches, with black fissures at base on older trees ..... downy serviceberry
    b. Leaf asymmetrical, rough, tapers to long point at apex; bark smooth at base, when older, gray with warty projections ..... hackberry

34. a. Leaf up to 4-6 inches long, smooth to lightly rough above; inner bark layers of red and white; pointed buds ..... American elm
    b. Leaf 5-7 inches long, very rough above; inner bark layers of dark brown and light brown; buds egg-shaped ..... slippery elm

35. a. Leaves toothed or having lobes with teeth; no acorns; single terminal buds ..... go to 36
    b. Leaves lobed or having spines at tips; acorns; clustered buds at end of twig (oaks) ..... go to 42

36. a. Leaf star-shaped, 5-pointed lobes, coarsely toothed; twigs with corky wings, seeds spiny balls; buds shiny ..... sweetgum
    b. Not as described above ..... go to 37

37. a. Leaf triangle-shaped (to almost heart-shaped), coarsely toothed, no sharp lobes or tips except at apex ..... go to 38
    b. Leaf more lobed or pointed ..... go to 39

38. a. Leaf with flat petiole, shiny and smooth above; twig often 4 sided with elongated lenticels ..... cottonwood
    b. Leaf without flat petiole, paler above ..... go to 39

39. a. Leaves with various shapes (oval, 2-lobed mitten-shaped, or 3 lobes); pointed buds rough above; twigs with milky sap ..... red mulberry
    b. Leaves uniformly shaped; no milky sap in twigs ..... go to 40

40. a. Leaves asymmetrically heart-shaped, dark green and smooth above; buds broadly egg-shaped; persistent, leaflike bracts ..... American basswood
    b. Leaves more lobed and pointed with serrations and teeth or doubly toothed ..... go to 41

41. a. Leaf large, 4-8 inched diameter; bark smooth gray or white mottled, peels; seeded ball ..... American sycamore
    b. Leaf small, 2-4 inches long; bark gray to brown; twigs with stiff thorns ..... downy hawthorn

Oaks

42. a. Leaf rounded lobes with no spines at tips; bark light gray to white ..... go to 43
    b. Leaf with pointed lobes, spines at tips; bark dark gray to black ..... go to 46

White Oak Group

43. a. Leaf wavy, margin saw-toothlike; twigs fine; bark almost yellow; small acorn ..... chinkapin oak
    b. Leaf edges entire, lobes rounded ..... go to 44

44. a. Lobes almost uniform, small; bark light gray, flakes into plates near top of tree; large acorn ..... white oak
    b. Lobes vary in width on the leaf ..... go to 45

45. a. Leaf thick and leathery; two broad side lobes making leaf look cross-shaped; thick branches; small acorn ..... post oak
    b. Large leaf, lobes wider above middle and deeply indented (almost to midrib); corky twigs; fringed cap covers most of very large acorn ..... bur oak

Red Oak Group

46. a. Leaf narrow, elliptical, entire with spine at apex, shiny upper surface; small to medium acorn ..... shingle oak
    b. Leaf broad and lobed with spines at apex ..... go to 47

47. a. Leaf thick and leathery; top bell-shaped with up to 3 broad lobes; keeps dead lower limbs, small acorn ..... blackjack oak
    b. Not as described above ..... go to 48

48. a. 5-7 single lobes extending two-thirds or more to midrib; lower limbs point down; acorn with dark stripes ..... pin oak
    b. Lobes with smaller lobes on them (double lobed) ..... go to 49

49. a. 5-9 primary lobes with nearly circular sinuses between lobes; acorns with concentric rings at tip ..... scarlet oak
    b. Lobes evenly spaced along leaf ..... go to 50

50. a. 7-10 lobes go only ¼ to ½ way to midrib; bark gray to black throughout tree; inner bark orange; bud star-shaped ..... black oak
    b. 7-10 lobes go ½ way or more to midrib; white "stripes" on bark; inner bark pink ..... northern red oak

Appendix B: Glossary (partially illustrated)

B.1. Leaf details

Leaf types

Evergreen–leaves that remain on year-round; shortleaf pine, for example
Deciduous–leaves fall during certain seasons of the year; maple, for example

Leaf arrangements

Opposite—buds arranged across from one another

Alternate—buds arranged in alternate positions along the stem

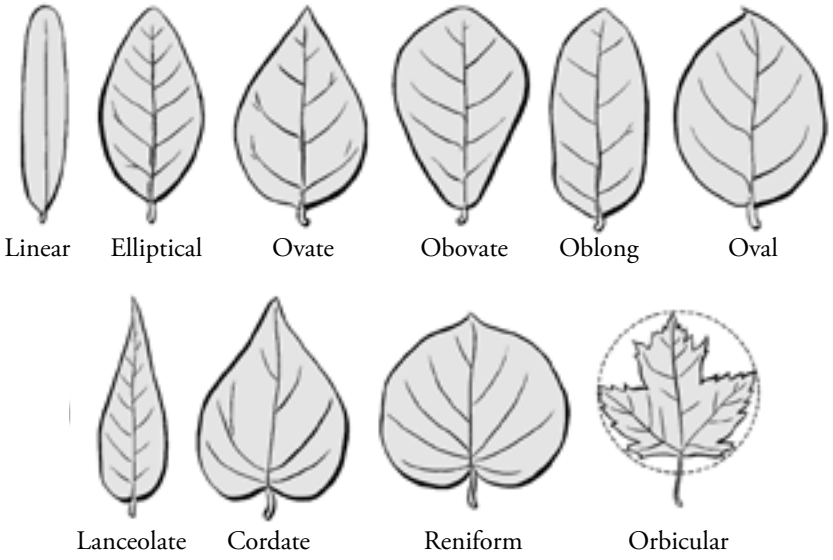
Leaf composition

Simple | Compound | Palmately compound | Pinnately compound | Bipinnately compound

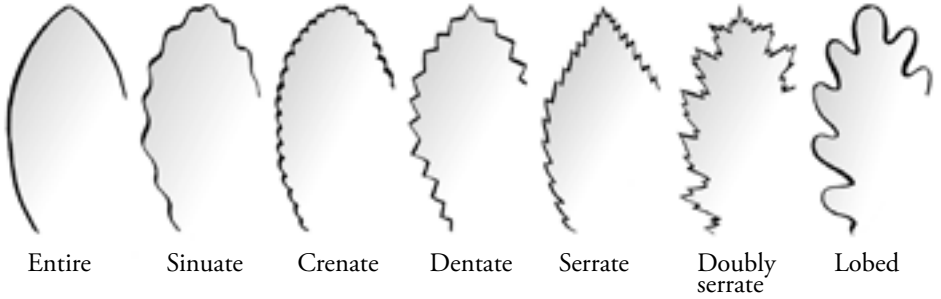
Leaf orientation

Apex–tip, top end
Base–bottom end
Above–face
Beneath–underside
Axis–central stalk of a compound leaf

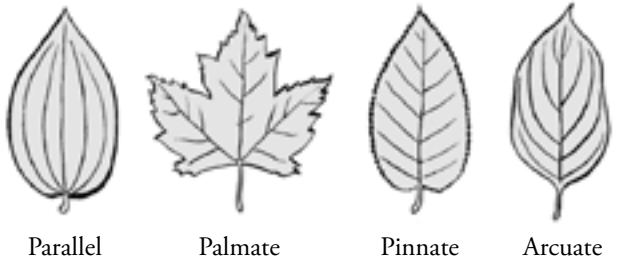
Leaf shapes



Leaf margins



Leaf venation



B.2. Fruit types

- Aggregate—cluster of several fruits (American sycamore, for example)
- Berry—fleshy fruit surrounding more than one seed (persimmon, for example)
- Catkin—resembling a cat's tail; a droopy, scaly spike of unisexual flowers without petals (hazelnut, for example)
- Cone—a coniferous fruit with woody scales containing one or more seeds (shortleaf pine, for example)
- Drupe—fleshy fruit with hard, central core containing one or more seeds (black cherry, for example)
- Nut or acorn—dry, one-seeded, hard, shell-covered fruit (nut/hickory, acorn/oak)
- Pod—fleshy or leathery sheath enclosing several beanlike seeds (honey locust, for example)
- Pome—thin-walled, fleshy body with an inner chamber containing seeds (downy service berry, for example)
- Samara—dry, one-seeded fruit with paperlike wings (maple, for example)

B.3. Bark types

Smooth—surface even, free of irregularities, roughness or projections
Warty—wart-like bumps or protrusions
Platy—broad, flat sections
Scaly—small, thin, plate-like covering, sometimes overlapping
Shaggy—coarse, shredded
Ridged—ridges interlaced or running lengthwise to the trunk
Furrowed—grooves running lengthwise to the trunk

B.4. Miscellaneous terms

- Dioecious—male and female flowers on separate trees
- Husk—outer covering of seed or fruit
- Leaf scar—a mark left on twig after the leaf drops
- Lenticel—small, corklike pore on young bark permitting the exchange of gases between stem and atmosphere
- Monoecious—male and female flowers on same tree
- Perfect—flower with both male and female parts
- Persistent—remaining on tree after dying
- Petiole—leaf stem
- Pith—soft, spongy, innermost tissue in a stem
- Sessile—not on stalks; directly attached to stem or axis
- Sinus—the rounded depression between two consecutive lobes of a leaf
- Terminal bud—bud at the tip of the stem
- Vein—vascular rib of a leaf

Appendix C: Additional resources

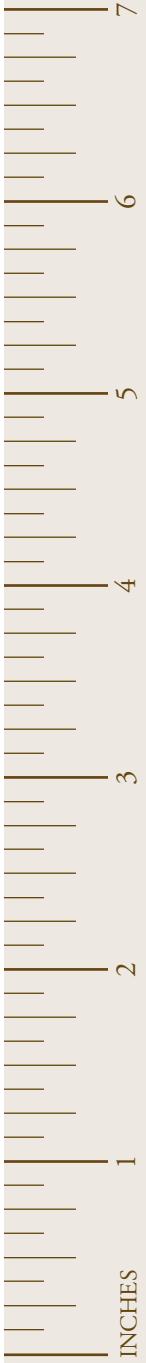
- *A Key to Missouri Trees in Winter: An Identification Guide*. Jerry Cliburn and Ginny Wallace. 1990. Missouri Department of Conservation.
- *Trees of Missouri*. Don Kurz. 2003. Missouri Department of Conservation.
- "Missouri's Oaks and Hickories." Missouri Department of Conservation.
- "Conservation Trees and Shrubs." Missouri Department of Conservation.
- "Urban Trees." Missouri Department of Conservation.
- "Show-me Trees" poster. Missouri Department of Conservation.
- *Trees of Missouri*. Carl Settergren and R.E. McDermatt. University Extension, University of Missouri, Columbia.
- *Steyermark's Flora of Missouri, Volume I*. George Yatskievych. 1999. The Missouri Botanical Garden Press.

A Key to Missouri Trees in Winter

Learn to identify Missouri trees and shrubs by examining their twigs and buds. Clear illustrations and concise descriptions make this an easy-to-use guide. Distribution maps are provided for each of the 123 different species. 48 pages. Revised 2004.

01-0081 - softcover—$3.00

Get it at the Nature Shop—www.mdcnatureshop.com



F00088 2005